BENCHMARK

ASBESTOS AND LEAD-BASED PAINT SURVEY

The Presidio
Bldg 228 Dry Cleaners
San Francisco, CA

Benchmark Project No: E09-694-ASU-LPI
Building Owner: State of California
Type of Structure: Dry Cleaners
Benchmark Technician: Terri MacFarlane
Site Visit Date: August 24, 2009

PREPARED FOR

Mr. David Keba
Department of Transportation-Right of Way
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PREPARED BY

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TABLE OF CONTENTS

EXECUTIVE SUMMARY 2
- Background 2
- Asbestos Containing Materials (ACM) 2
- Lead Based Paint 2

FINDINGS AND OBSERVATIONS 3
- Asbestos 3
- Lead-Based Paint 4

SCOPE OF SERVICES-ASBESTOS 4

METHODOLOGY-ASBESTOS 4
- General 4
- Visual Inspection 4
- Homogenous Material Classification 4
- Sampling Procedures 4
- Methods of Analysis 5
- Laboratory Quality Control Program 5
- Asbestos Containing Materials (ACM): 5
- Asbestos Containing Construction Materials (ACCM) 6

SCOPE OF SERVICES-LEAD 7

METHODOLOGY-LEAD 7
- General Reference 7
- Visual Inspection 7
- Sampling Process 7
- Sampling Procedures Lead-Based Paint Inspection (X-Ray Fluorescence (XRF) Analysis) 7
- Quality Control Program 8

GENERAL 8
- Warranty 8

APPENDIX A: Asbestos Laboratory Results and Table 1

APPENDIX B: Lead-Based Paint XRF Results 2

APPENDIX C: Certifications and Lead Hazard Evaluation Form 3

APPENDIX D: Previous Survey Information 4

APPENDIX E: Diagram 5

Benchmark Environmental Engineering was retained by Mr. David Keba of the Department of Transportation Right of Way to conduct an asbestos and lead-based paint survey at The Presidio, Bldg 228 Dry Cleaners in San Francisco, California.

Written authorization to perform this survey was received by Benchmark from Mr. Keba.

The asbestos and lead-based paint survey was conducted on August 24, 2009 and was comprised of surveying all areas of the building which will undergo demolition as part of the Department of Transportation Right of Way program.

Background

The structure located at The Presidio, Bldg 228 Dry Cleaners in San Francisco CA was previously utilized as a Dry Cleaners. The structure consists of an open warehouse area, equipment storage areas and a bathroom. A previous asbestos inspection was conducted by Versar in January 1996.

Asbestos Containing Materials (ACM)

Six (6) samples were collected of materials scheduled for disturbance and analyzed for asbestos content.

The following suspect asbestos materials were sampled by Benchmark
- Roof Shingle
- Roof Felt
- Floor tile and Mastic

The following suspect asbestos materials were sampled by Versar, Inc in January 1996:
None of these listed materials sampled with the exception of the Thermal System Insulation and Fittings contained asbestos

- *Thermal System Insulation (Pipe Wrap)*
- *Fittings*
- Plaster Walls
- Misc. Debris
- Window Putty
- Fiber Board
- Roof Shingles
- Roof Felt
- Vinyl Floor Tiles and Mastic
- Fire Doors
- Vinyl Base Coving and Mastic
- Roof Tar

Lead Based Paint

In order to determine if lead based paint is present, one hundred one (101) assays were collected using an X-RAY FLOURESCENCE (XRF) instrument. Numerous components have been identified with lead in the paint above the EPA and DHS level of 1.0 mg/cm^2 or 5000 PPM.

The overall condition of the paint was in fair/poor condition. Any painted surface which has been identified as having lead in the paint at or above the DHS level of 5000 parts per million and is in fair to poor condition must be considered a Hazard. Worker protection must be implemented during all phases of the demolition. (Title 8, CCR 1532.1.)

The following table summarizes the material sampled, location, analytical results in percent of asbestos present, the friability of the material, the condition of the material, the estimated quantities of the material and the estimated removal cost.

Asbestos Samples

Material	Location	% of Asbestos	Friable\ Non-Friable	Condition	Quantities *	Removal Cost Estimate
Roofing Shingle and Felt	Roof	N/A	N/A	N/A	N/A	N/A
Floor Tiles (multi Layers) and Mastic	Entry Floor	2% Chrysotile (Tile) 5% Chrysotile (Mastic)	Non-Friable	Fair	90 SF	$300
9"x9" Floor Tiles and Mastic	Bathroom	5% Chrysotile (Tile) 2% Chrysotile (Msatic)	Non-Friable	Fair	100 SF	$300
12" x12" Floor tile and Mastic	Bathroom	<1% Chrysotile (Tile) 5% Chrysotile (Mastic)	Non-Friable	Fair	40 SF	$200
Thermal System Insulation-Pipe Wrap Versar Survey	Pipe Runs	30-35% Chrysotile	Friable	Intact	342 LF	$6,000
Fittings Versar Survey	Throughout Pipe Runs	17-35% Chrysotile	Friable	Intact	10 LF	$1,500

*This is a field estimate only and should be quantified by the contractor prior to removal

Asbestos

A material is considered by the EPA to be asbestos-containing if at least one sample collected from the area shows asbestos present in an amount greater than one percent (> 1%). *The Asbestos Laboratory Results can be found in Appendix A*

Lead-Based Paint

The results indicated that the following building components were above the EPA and DHS level of 1.0 mg/cm^2 or 5000 PPM. Lead-Based paint, as defined by EPA/HUD, was identified on the components assayed. See Appendix B for the Preliminary XRF Readings.

Location	Component	Estimated Disposal Cost
Exterior	Window components, Fascia, Rafter Tail, Eaves, Double Door, Door jamb, Window screen	$5,000
Open Warehouse	Painted Brick, Window components, Header/Beams, Ceiling	$5,000
Equipment Room	Painted Brick, Window components, Sliding Door	$2,500
Storage #1	Painted Brick, Door components, Window components	$3,000
Bathroom:	Painted Brick, Window components, Door components	$3,000
Equipment Room #2	Painted Brick, Window components, Door Components	$2,500
Storage #2:	Painted Brick, Window components, Door	$2,500

The XRF results can be found in APPENDIX B- Lead Based Paint XRF Results Page

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SCOPE OF SERVICES-ASBESTOS

Asbestos sampling was performed by a Certified Asbestos Consultant (CAC). Bulk asbestos samples obtained from the facility were analyzed in the laboratory using Polarized Light Microscopy (PLM) with dispersion staining. The Inspection, sampling, and assessment procedures were performed in accordance with the guidelines published by the EPA in 125CFR Part 763 Subpart E, October 30, 1987.

METHODOLOGY-ASBESTOS

General

The survey consisted of three major activities: visual inspection, sampling, and analysis. Although these activities are listed separately, they are integrated tasks.

Visual Inspection

An initial building walkthrough was conducted to determine the presence of suspect materials that were accessible or exposed. Materials that were similar in general appearance were grouped into homogeneous sampling areas.

Homogenous Material Classification

A preliminary walkthrough of the building was conducted to determine areas of materials that were visually similar in color, texture, and general appearance and that appeared to have been installed at the same time. Such materials are termed "homogeneous materials" by the EPA. During this walkthrough, the approximate locations of these homogeneous materials were noted.

Sampling Procedures

Following the walkthrough, the inspector collected selected samples of exposed or accessible materials identified as suspect ACM. EPA guidelines were used to determine the sampling protocol. Sampling locations were chosen to be representative of the homogeneous material.

Samples of surfacing material for asbestos were collected in general accordance with the EPA random sampling

protocol outlined in the EPA publication, "Asbestos in Buildings: Simplified Sampling Scheme for Friable Surfacing Materials" (EPA 560/5-85-030a, October 1985). Samples of miscellaneous materials were taken as randomly as possible, while attempting to sample already damaged areas so as to minimize disturbance of the material.

Methods of Analysis

Analysis was performed by visually observing the bulk sample and preparing slides for microscopic examination and identification. The samples were mounted on slides and then analyzed for asbestos (Chrysotile, Amosite, Crocidolite, Anthophyllite, and Actinolite/Tremolite), fibrous non-asbestos constituents (mineral wool, paper, etc.) and non-fibrous constituents. Asbestos was identified by refractive indices, morphology, color, pleochroism, birefringence, extinction characteristics, and signs of elongation. The same characteristics were used to identify the non-asbestos constituents.

The microscopist used a stereoscope to visually estimate relative amounts of each constituent using a stereoscope to determine the volume of each constituent in proportion to the total volume of the sample. All bulk samples were analyzed by Polarized Light Microscopy (PLM) with dispersion staining as described by the interim method of the determination of asbestos in bulk insulation, Federal Register, Volume 47, No. 103, May 27, 1982. This is a standard method of analysis in optical mineralogy and the currently accepted method for the determination of asbestos in bulk samples. A suspect material is immersed in a solution of known refractive index and subjected to illumination by polarized light. The characteristic color displays that result enable mineral identification. It should be noted that some ACM may not be accurately identified or quantified by PLM. As an example, the original fabrication of vinyl floor tiles routinely involved milling of asbestos fibers to extremely small sizes. As a result, these fibers may go undetected under the standard polarized light microscopy method. Transmission Electron Microscopy (TEM) is recommended for a more definitive analysis of these materials.

Laboratory Quality Control Program

Forensic Analytical located in Hayward, California, performed the analysis. Forensic maintains an in-house quality control program. This program involves blind reanalysis of ten percent of all samples, precision and accuracy controls, and use of standard bulk reference materials.

Asbestos Containing Materials (ACM):

A material is considered by the EPA to be asbestos-containing if at least one sample collected from the area shows asbestos present in an amount greater than one percent (> 1%).

Removal and disposal of asbestos containing materials (ACM) must be performed in accordance with Bay Area Air Quality Management District (BAAQMD) and California-Occupational Safety and Health Administration (CAL/OSHA) notification and work practice requirements.

EPA groups asbestos containing materials (ACM) into three (3) types:

- Friable ACM – Asbestos containing materials that can reduce to powder by hand pressure such as, thermal system insulation (TSI), acoustical ceiling material.

- Category I non-friable ACM - asbestos-containing resilient floor coverings or VAT, asphalt roofing products, packings and gaskets.

- Category II non-friable ACM – any material, excluding Category I materials, that when dry, cannot be crumbled, pulverized or reduced to powder by hand pressure.

It is possible for any of the above types of ACM to become Regulated Asbestos Containing Materials (RACMs) under the Standard. RACMs are defined as:

- Friable ACM

- Category I non-friable ACM that has become friable.
- Category I non-friable ACM that has been or will be subjected to sanding, grinding, cutting, or abrading
- Category II non-friable ACM which has already been or is likely to become crumbled, pulverized, or reduced to powder by mechanical forces expected to act on the materials during demolition/renovation operations as covered by the Standard.

Asbestos Containing Construction Materials (ACCM)

Although the material is not considered "asbestos containing" as defined by the EPA, the material does contain asbestos and is subject to OSHA regulations pertaining to employee exposure.

Title 8 of the California Code of Regulations, CCR Section 341.6-11 defines asbestos-containing construction materials (ACCM) as construction materials having greater than one-tenth of one percent (0.1%) by weight. This applies to Cal-OSHA regulations pertaining to the protection of workmen engaged in the removal of ACCM.

ACCM must be removed using the same regulation procedures as materials containing 1% asbestos as defined by EPA 125CFR 763 and OSHA 763 and OSHA 29 CFR 1926.1101 with regard to asbestos work classifications I, II, III, and IV including negative exposure assessments (NEA) and use of regulated areas.

SCOPE OF SERVICES-LEAD

Benchmark understands the scope of work for this project to be a Lead Based Paint Inspection The lead-based paint inspection was conducted in general accordance with Title 17 of the California Code of Regulations (CCR), Division 1, Chapter 8 and United States Department of Housing and Urban Development (HUD) document entitled Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing, published June 1995 (Revised 1997). The Risk assessment was conducted in general accordance with Chapter 5 of the HUD Guidelines.

METHODOLOGY-LEAD

General Reference

The survey consisted of three major activities: visual inspection, sampling, and analysis. Although these activities are listed separately, they are integrated tasks.

Visual Inspection

A Department of Health Services Certified Lead Inspector/Risk Assessor performed the inspection. An initial building walkthrough was conducted to determine the presence of suspect materials that were accessible or exposed.

Sampling Process

Following the walkthrough, the inspector selected sample areas of exposed or accessible materials identified as suspect Lead-Based Paint. State and Federal Guidelines were used to determine the sampling protocol. Sampling locations were chosen to be representative of the homogeneous material.

Sampling Procedures Lead-Based Paint Inspection (X-Ray Fluorescence (XRF) Analysis)

XRF instruments measure lead-in-paint by directing high energy X-rays and gamma rays into the paint, causing the lead atoms in the paint to emit X-rays which are detected by the instrument and converted to a measurement of the amount of lead in the paint. The EPA approved technology allows for measurement of X-rays without scraping or samples preparation to characterize substrate or matrix effects. The Spectrum Analyzer, Metals Analysis Probe (MAP 4) is combined with a microprocessor system that enables field-testing with a high degree of quality control and speed. Sample locations, descriptions, conditions, and measurement results are automatically recorded by the instrument and easily downloaded to a PC or laptop.

All results were compared to the State and Federal Guidelines:
1.0 mg/cm^2 = XRF-Lead-based Paint

The lead-based paint inspection was conducted in general accordance with Title 17 of the California Code of Regulations (CCR), Division 1, Chapter 8 and United States Department of Housing and Urban Development (HUD) document entitled Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing, published June 1995 (Revised 1997).

All building components identified on the site inspection that may contain lead-based paint/coating were targeted for testing (interior and/or exterior walls, doors and all associated components).

The testing and sampling protocol was comprised of testing with an X-Ray Fluorescence (XRF) analyzer. The XRF instrument is set with a unique identification number, which lists the building components.

Quality Control Program

Benchmark Environmental Engineering utilizes only DHS approved inspectors, which are certified to use radioactive instruments. The MAP 4 Spectrum Analyzer has on-board calibration routines, which continuously operate, and self-correct to minimized sampling error. This is known as substrate correcting software.

GENERAL

Warranty

Benchmark warrants that the findings contained herein have been prepared with the level of care and skill exercised by experienced and knowledgeable environmental consultants who are appropriately licensed or otherwise trained to perform asbestos assessments pursuant to the scope of work required on this project.

The survey included inspection of accessible materials such as above or behind suspended ceilings or other non-permanent structures. Benchmark did not inspect or sample inaccessible areas such as behind walls or within ductwork and did not dismantle any part of the structure to survey inaccessible areas. Inaccessible materials that are visible to Benchmark's inspectors shall be assumed asbestos containing or lead-based paint containing.

APPENDIX A: Asbestos Laboratory Results and Table

Forensic Analytical Laboratories

Final Report

Bulk Asbestos Analysis

(EPA Method 600/R-93-116, Visual Area Estimation)

Benchmark Environmental
Project Manager
3732-A Charter Park Drive

San Jose, CA 95136

Client ID: 3565
Report Number: B127577
Date Received: 08/26/09
Date Analyzed: 08/28/09
Date Printed: 08/28/09
First Reported: 08/28/09

Job ID/Site: E09-694 - Building 228, Presidio, San Francisco

Date(s) Collected: 08/24/2009

FALI Job ID: 3565
Total Samples Submitted: 6
Total Samples Analyzed: 6

Sample ID	Lab Number	Asbestos Type	Percent in Layer	Asbestos Type	Percent in Layer	Asbestos Type	Percent in Layer
694-8-24-1B	10897798						
Layer: Black Tar Stones			**ND**				
Layer: Black Felt			**ND**				
Layer: Black Tar Stones			**ND**				
Layer: Black Felt			**ND**				
Layer: Black Tar			**ND**				
Layer: Black Felt			**ND**				
Layer: Black Felt			**ND**				
Total Composite Values of Fibrous Components:		**Asbestos (ND)**					
Cellulose (45 %) Fibrous Glass (20 %)							
Comment: Bulk complex sample.							
694-8-24-2B	10897799						
Layer: Stones			**ND**				
Layer: Black Tar			**ND**				
Layer: Black Felt			**ND**				
Layer: Black Felt			**ND**				
Total Composite Values of Fibrous Components:		**Asbestos (ND)**					
Cellulose (40 %) Fibrous Glass (35 %)							
694-8-24-3B	10897800						
Layer: Off-White Tile			**ND**				
Layer: Yellow Mastic			**ND**				
Layer: Beige Tile		Chrysotile	**2 %**				
Layer: Black Mastic		Chrysotile	**5 %**				
Layer: Green Tile		Chrysotile	**5 %**				
Laver: Black Mastic		Chrysotile	**5 %**				
Layer: Grey Tile		Chrysotile	**5 %**				
Layer: Black Mastic			**ND**				
Total Composite Values of Fibrous Components:		**Asbestos (3%)**					
Cellulose (Trace)							
Comment: Bulk complex sample.							

3777 Depot Road, Suite 409, Hayward, CA 94545 / Telephone: (510) 887-8828 (800) 827-FASI / Fax: (510) 887-4218

Client Name: Benchmark Environmental

Report Number: B127577
Date Printed: 08/28/09

Sample ID	Lab Number	Asbestos Type	Percent in Layer	Asbestos Type	Percent in Layer	Asbestos Type	Percent in Layer
694-8-24-4B	10897801						
Layer: Off-White Tile			**ND**				
Layer: Yellow Mastic			**ND**				
Layer: Beige Tile		Chrysotile	**2 %**				
Layer: Black Mastic		Chrysotile	**5 %**				
Layer: Grey Tile		Chrysotile	**5 %**				
Total Composite Values of Fibrous Components:		**Asbestos (2%)**					
Cellulose (Trace)							
Comment: Bulk complex sample.							
694-8-24-5B	10897802						
Layer: Brown Tile		Chrysotile	**5 %**				
Layer: Black Mastic		Chrysotile	**2 %**				
Total Composite Values of Fibrous Components:		**Asbestos (5%)**					
Cellulose (Trace)							
Comment: Bulk complex sample.							
694-8-24-6B	10897803						
Layer: Beige Tile		Chrysotile	**Trace**				
Layer: Black Mastic		Chrysotile	**5 %**				
Total Composite Values of Fibrous Components:		**Asbestos (Trace)**					
Cellulose (Trace)							
Comment: Bulk complex sample.							

James Flores, Laboratory Supervisor, Hayward Laboratory

Note: Limit of Quantification ('LOQ') = 1%. 'Trace' denotes the presence of asbestos below the LOQ. 'ND' = 'None Detected'.

3777 Depot Road, Suite 409, Hayward, CA 94545 / Telephone: (510) 887-8828 (800) 827-FASI / Fax: (510) 887-4218

BENCHMARK
3732 Charter Park Drive, Ste. A San Jose CA 95136
408-448-7594 408-448-3849 (fax)

BULK CHAIN OF CUSTODY

Please Include Sample Locations On Laboratory Report

Page: 1 of ____

Project #: E09-694 Date: 08/24/09 Technician: G / Teri

Project Address: Building 228, Presidio, SF Francisco

Client Name: _____ Company: _____

Sample Number	Location	Homogenous Group or Measurement	Material or Component	Results To Be Reported As
694-8.24.13	Roof	1	Roof shingle + felt paper	
2B	Roof			
3B	Building Entry Floor Tile	2	FT/mastic	
4B				
5B	Bathroom Area	3	9"x9" FT/mastic	
6B			12"x12" FT/mastic	

Circle Project Type
Asbestos (Survey/Sample Collection)
Lead-Based Paint
Risk Assessment (Lead)
Clearance Lead
Mold/Fungus (Baseline)
Sewage Screen (Baseline)
Sewage Screen (Post-Remediation)
Other: _____

Circle Type of Analysis
PLM/Bulk (EPA 600)
EPA SW 846-7420 FLAA
Dust Wipe, Soil, Paint Chip *Ghost Wipes*
GFAA Water (lead)
Qualitative (MUG) E.Coli/Coliforms (Soil/Swab)
Direct Microscopic Exam (Tape/Swab)
Other: _____

Circle Turnaround Time
Same Day/Rush
24 Hour
48 Hour
72 Hour
5 Day
Other: _____

Relinquished By: Gerardo Received By: 9:20am Date/Time: 8/26/09

APPENDIX B: Lead-Based Paint XRF Results

Walls are referenced as A, B, D and D

Wall A is the street side of the residence

Walls B, C, and D are numbered clockwise

Dept. Of Transportation
David Keba
Oakland, CA

XRF Spread Sheet

The Presidio
Bldg 228
San Francisco

Calibrations, Exterior, and Common											
Data ID #	**Room Type**	**Component**	**Wall #**	**Substrate**	**Condition**	**Color**	**K-Shell**	**L-Shell**	**Result**	**Date**	**Time**
375	Calibration	*	*	*	*	*	0.929	0.932	Inconclusive	24-Aug-09	02:18P
376	Calibration	*	*	*	*	*	0.892	0.897	Inconclusive	24-Aug-09	02:19P
377	Calibration	*	*	*	*	*	0.992	0.955	Inconclusive	24-Aug-09	02:20P
378	Calibration	*	*	*	*	*	1	0.967	Inconclusive	24-Aug-09	02:21P
379	Calibration	*	*	*	*	*	1.018	0.848	Inconclusive	24-Aug-09	02:22P
380	Calibration	*	*	*	*	*	1.027	1.023	Inconclusive	24-Aug-09	02:23P
381	Calibration	*	*	*	*	*	0	0	Uknown	24-Aug-09	02:24P
382	*Exterior*	*Window Sill*	*A*	*Wood*	*Fair*	*White/Off White*	*14.579*	*1.193*	*XRF Positive*	*24-Aug-09*	*02:26P*
383	*Exterior*	*Window Frame*	*A*	*Wood*	*Fair*	*White/Off White*	*8.024*	*1.172*	*XRF Positive*	*24-Aug-09*	*02:26P*
384	*Exterior*	*Window Sash*	*A*	*Wood*	*Fair*	*White/Off White*	*12.664*	*1.746*	*XRF Positive*	*24-Aug-09*	*02:26P*
385	*Exterior*	*Fascia*	*A*	*Wood*	*Fair*	*White/Off White*	*22.633*	*2.191*	*XRF Positive*	*24-Aug-09*	*02:27P*
386	*Exterior*	*Rafter Tail*	*A*	*Wood*	*Poor*	*White/Off White*	*3.943*	*1.204*	*XRF Positive*	*24-Aug-09*	*02:27P*
387	*Exterior*	*Eaves*	*A*	*Wood*	*Poor*	*White/Off White*	*10.184*	*1.275*	*XRF Positive*	*24-Aug-09*	*02:27P*
388	Exterior	Window Screen	A	Metal	Intact	White/Off White	0.433	0.47	Negative	24-Aug-09	02:27P
389	*Exterior*	*Window Sill*	*B*	*Wood*	*Intact*	*White/Off White*	*7.394*	*3.619*	*XRF Positive*	*24-Aug-09*	*02:28P*
390	*Exterior*	*Window Frame*	*B*	*Wood*	*Intact*	*White/Off White*	*5.598*	*1.748*	*XRF Positive*	*24-Aug-09*	*02:28P*
391	*Exterior*	*Window Sash*	*B*	*Wood*	*Fair*	*White/Off White*	*7.642*	*1.761*	*XRF Positive*	*24-Aug-09*	*02:28P*
392	*Exterior*	*Window Sill*	*C*	*Wood*	*Fair*	*White/Off White*	*6.553*	*1.855*	*XRF Positive*	*24-Aug-09*	*02:29P*
393	*Exterior*	*Window Frame*	*C*	*Wood*	*Fair*	*White/Off White*	*3.054*	*1.099*	*XRF Positive*	*24-Aug-09*	*02:29P*
394	*Exterior*	*Window Sash*	*C*	*Wood*	*Fair*	*White/Off White*	*3.105*	*1.515*	*XRF Positive*	*24-Aug-09*	*02:29P*
395	*Exterior*	*Double Door*	*C*	*Wood*	*Fair*	*White/Off White*	*3.655*	*1.465*	*XRF Positive*	*24-Aug-09*	*02:29P*
396	*Exterior*	*Door Jamb*	*C*	*Wood*	*Fair*	*White/Off White*	*8.479*	*2.463*	*XRF Positive*	*24-Aug-09*	*02:30P*
397	*Exterior*	*Fascia*	*C*	*Wood*	*Fair*	*White/Off White*	*9.284*	*2.406*	*XRF Positive*	*24-Aug-09*	*02:30P*
398	*Exterior*	*Eaves*	*C*	*Wood*	*Poor*	*White/Off White*	*10.476*	*1.096*	*XRF Positive*	*24-Aug-09*	*02:30P*
399	*Exterior*	*Rafter Tail*	*C*	*Wood*	*Poor*	*White/Off White*	*13.959*	*1.723*	*XRF Positive*	*24-Aug-09*	*02:30P*
400	Exterior	Paneling	D	Wood	Poor	White/Off White	0.091	0.168	Negative	24-Aug-09	02:31P
401	*Exterior*	*Window Sill*	*D*	*Wood*	*Poor*	*White/Off White*	*18.171*	*1.563*	*XRF Positive*	*24-Aug-09*	*02:31P*
402	*Exterior*	*Window Frame*	*D*	*Wood*	*Poor*	*White/Off White*	*10.204*	*1.245*	*XRF Positive*	*24-Aug-09*	*02:31P*
403	*Exterior*	*Window Sash*	*D*	*Wood*	*Poor*	*White/Off White*	*6.69*	*0.539*	*XRF Positive*	*24-Aug-09*	*02:31P*
404	*Exterior*	*Eaves*	*D*	*Wood*	*Fair*	*White/Off White*	*9.153*	*1.72*	*XRF Positive*	*24-Aug-09*	*02:32P*
405	*Exterior*	*Rafter Tail*	*D*	*Wood*	*Poor*	*White/Off White*	*17.41*	*2.135*	*XRF Positive*	*24-Aug-09*	*02:32P*
406	*Exterior*	*Window Screen*	*D*	*Metal*	*Intact*	*White/Off White*	*17.819*	*2.415*	*XRF Positive*	*24-Aug-09*	*02:32P*
407	*Open Warehouse*	*Painted Brick*	*A*	*Tile/Masonry*	*Intact*	*White/Off White*	*25.627*	*1.099*	*XRF Positive*	*24-Aug-09*	*02:44P*

Dept. Of Transportation
David Keba
Oakland, CA

XRF Spread Sheet

The Presidio
Bldg 228
San Francisco

Data ID #	Room Type	Component	Wall #	Substrate	Condition	Color	K-Shell	L-Shell	Result	Date	Time
408	Open Warehouse	Window Frame	A	Wood	Fair	White/Off White	28.81	-0.257	XRF Positive	24-Aug-09	02:44P
409	Open Warehouse	Window Sash	A	Wood	Fair	White/Off White	18.075	0.063	XRF Positive	24-Aug-09	02:44P
410	Open Warehouse	Window Sill	B	Wood	Fair	White/Off White	21.051	1.496	XRF Positive	24-Aug-09	02:44P
411	Open Warehouse	Painted Brick	B	Tile/Masonry	Intact	White/Off White	3.231	1.316	XRF Positive	24-Aug-09	02:45P
412	Open Warehouse	Window Sash	B	Wood	Fair	White/Off White	19.221	0.764	XRF Positive	24-Aug-09	02:45P
413	Open Warehouse	Window Frame	B	Wood	Fair	White/Off White	18.547	1.168	XRF Positive	24-Aug-09	02:45P
414	Open Warehouse	Painted Brick	C	Tile/Masonry	Intact	Red/Pink	0.007	-0.197	Negative	24-Aug-09	02:45P
415	Open Warehouse	Painted Brick	C	Tile/Masonry	Intact	Red/Pink	-0.246	-0.058	Negative	24-Aug-09	02:46P
416	Open Warehouse	Painted Brick	D	Tile/Masonry	Intact	White/Off White	22.347	1.285	XRF Positive	24-Aug-09	02:46P
417	Open Warehouse	Header/Beam	D	Wood	Fair	White/Off White	24.351	0.675	XRF Positive	24-Aug-09	02:46P
418	Open Warehouse	Ceiling	A	Wood	Intact	White/Off White	2.804	0.685	XRF Positive	24-Aug-09	02:47P
419	Equipment Room	Painted Brick	A	Tile/Masonry	Intact	Gray	-0.024	-0.365	Negative	24-Aug-09	02:47P
420	Equipment Room	Painted Brick	B	Tile/Masonry	Poor	White/Off White	26.743	2.716	XRF Positive	24-Aug-09	02:47P
421	Equipment Room	Window Sash	B	Wood	Fair	White/Off White	18.471	0.87	XRF Positive	24-Aug-09	02:47P
422	Equipment Room	Window Frame	B	Wood	Fair	White/Off White	19.75	2.009	XRF Positive	24-Aug-09	02:47P
423	Equipment Room	Window Sill	B	Wood	Fair	White/Off White	11.905	1.344	XRF Positive	24-Aug-09	02:48P
424	Equipment Room	Painted Brick	C	Tile/Masonry	Poor	White/Off White	0.126	-0.266	Negative	24-Aug-09	02:48P
425	Equipment Room	Painted Brick	D	Tile/Masonry	Intact	Gray	0.147	-0.066	Negative	24-Aug-09	02:48P

Dept. Of Transportation
David Keba
Oakland, CA

XRF Spread Sheet

The Presidio
Bldg 228
San Francisco

Data ID #	Room Type	Component	Wall #	Substrate	Condition	Color	K-Shell	L-Shell	Result	Date	Time
426	Equipment Room	Sliding Door	D	Metal	Fair	Red/Pink	3.77	3.628	XRF Positive	24-Aug-09	02:49P
427	Equipment Room	Header/Beam	D	Metal	Intact	Red/Pink	0.119	0.699	Negative	24-Aug-09	02:49P
428	Storage #1	Painted Brick	A	Tile/Masonry	Fair	White/Off White	8.993	0.987	XRF Positive	24-Aug-09	02:49P
429	Storage #1	Painted Brick	B	Tile/Masonry	Intact	White/Off White	4.987	0.463	XRF Positive	24-Aug-09	02:50P
430	Storage #1	Door Casing	B	Wood	Fair	White/Off White	3.925	0.503	XRF Positive	24-Aug-09	02:50P
431	Storage #1	Door Jamb	B	Wood	Fair	White/Off White	17.752	1.309	XRF Positive	24-Aug-09	02:50P
432	Storage #1	Door	B	Wood	Fair	White/Off White	2.709	1.041	XRF Positive	24-Aug-09	02:50P
433	Storage #1	Painted Brick	C	Tile/Masonry	Fair	White/Off White	3.984	1.798	XRF Positive	24-Aug-09	02:50P
434	Storage #1	Window Sash	C	Wood	Fair	White/Off White	9.257	2.212	XRF Positive	24-Aug-09	02:50P
435	Storage #1	Window Sill	C	Wood	Fair	White/Off White	4.1	0.584	XRF Positive	24-Aug-09	02:50P
436	Storage #1	Window Frame	C	Wood	Fair	White/Off White	3.086	0.008	XRF Positive	24-Aug-09	02:51P
438	Storage #1	Double Door	C	Wood	Fair	Gray	1.699	0.049	XRF Positive	24-Aug-09	02:52P
439	Storage #1	Painted Brick	D	Tile/Masonry	Poor	White/Off White	13.709	1.242	XRF Positive	24-Aug-09	02:52P
440	Bath #1	Painted Brick	A	Tile/Masonry	Fair	White/Off White	16.946	0.131	XRF Positive	24-Aug-09	02:52P
441	Bath #1	Painted Brick	B	Tile/Masonry	Fair	White/Off White	16.132	0.154	XRF Positive	24-Aug-09	02:52P
442	Bath #1	Window Sill	B	Wood	Fair	White/Off White	1.799	0.7	XRF Positive	24-Aug-09	02:53P
443	Bath #1	Window Frame	B	Wood	Fair	White/Off White	3.241	0.803	XRF Positive	24-Aug-09	02:53P
444	Bath #1	Window Sash	B	Wood	Fair	White/Off White	10.164	3.484	XRF Positive	24-Aug-09	02:53P
445	Bath #1	Painted Brick	C	Tile/Masonry	Fair	White/Off White	1.99	0.072	XRF Positive	24-Aug-09	02:53P
446	Bath #1	Painted Brick	D	Tile/Masonry	Fair	White/Off White	2.211	0.227	XRF Positive	24-Aug-09	02:53P
447	Bath #1	Door Casing	D	Wood	Fair	White/Off White	15.838	1.605	XRF Positive	24-Aug-09	02:54P
448	Bath #1	Door Jamb	D	Wood	Fair	White/Off White	19.031	1.221	XRF Positive	24-Aug-09	02:54P
449	Bath #1	Door	D	Wood	Fair	White/Off White	2.955	0.49	XRF Positive	24-Aug-09	02:54P
450	Equipment Room #2	Painted Brick	A	Tile/Masonry	Fair	Gray	-0.301	0.073	Negative	24-Aug-09	02:55P
451	Equipment Room #2	Painted Brick	B	Tile/Masonry	Fair	Gray	5.811	0.039	XRF Positive	24-Aug-09	02:55P
452	Equipment Room #2	Painted Brick	C	Tile/Masonry	Fair	Gray	10.668	0.907	XRF Positive	24-Aug-09	02:55P
453	Equipment Room #2	Window Sash	C	Wood	Fair	White/Off White	11.958	2.812	XRF Positive	24-Aug-09	02:55P
454	Equipment Room #2	Window Sill	C	Wood	Fair	White/Off White	13.89	2.272	XRF Positive	24-Aug-09	02:55P

Dept. Of Transportation
David Keba
Oakland, CA

XRF Spread Sheet

The Presidio
Bldg 228
San Francisco

Data ID #	Room Type	Component	Wall #	Substrate	Condition	Color	K-Shell	L-Shell	Result	Date	Time
455	Equipment Room #2	Window Frame	C	Wood	Fair	White/Off White	17.431	3.734	XRF Positive	24-Aug-09	02:56P
456	Equipment Room #2	Painted Brick	D	Tile/Masonry	Fair	Gray	8.151	-0.07	XRF Positive	24-Aug-09	02:56P
457	Equipment Room #2	Door	D	Wood	Fair	White/Off White	1.653	1.299	XRF Positive	24-Aug-09	02:56P
458	Equipment Room #2	Door Casing	D	Wood	Fair	Black	18.202	1.348	XRF Positive	24-Aug-09	02:56P
459	Equipment Room #2	Door Jamb	D	Wood	Fair	Black	19.183	1.253	XRF Positive	24-Aug-09	02:57P
460	Storage #2	Painted Brick	A	Tile/Masonry	Intact	White/Off White	20.631	0.151	XRF Positive	24-Aug-09	02:58P
461	Storage #2	Door Jamb	A	Wood	Intact	White/Off White	12.119	0.654	XRF Positive	24-Aug-09	02:58P
462	Storage #2	Door	A	Wood	Intact	White/Off White	0.134	0.175	Negative	24-Aug-09	02:58P
463	Storage #2	Painted Brick	B	Tile/Masonry	Fair	White/Off White	18.255	0.91	XRF Positive	24-Aug-09	02:58P
464	Storage #2	Painted Brick	C	Tile/Masonry	Fair	White/Off White	26.504	1.531	XRF Positive	24-Aug-09	02:59P
465	Storage #2	Window Sill	C	Wood	Intact	White/Off White	22.509	0.603	XRF Positive	24-Aug-09	02:59P
466	Storage #2	Window Sash	C	Wood	Fair	White/Off White	20.969	1.223	XRF Positive	24-Aug-09	02:59P
467	Storage #2	Window Frame	C	Wood	Fair	White/Off White	19.372	0.384	XRF Positive	24-Aug-09	02:59P
468	Storage #2	Painted Brick	D	Tile/Masonry	Fair	White/Off White	27.629	0.748	XRF Positive	24-Aug-09	02:59P
469	Storage #2	Door	D	Wood	Fair	White/Off White	2.514	0.694	XRF Positive	24-Aug-09	02:59P
470	Storage #2	Stair Tread	A	Concrete	Fair	Yellow/Orange	0.089	0.436	Negative	24-Aug-09	03:00P
471	Calibration	*	*	*	*	*	0	0	Uknown	24-Aug-09	03:00P
472	Calibration	*	*	*	*	*	1.009	0.949	Inconclusive	24-Aug-09	03:08P
473	Calibration	*	*	*	*	*	0.906	0.775	Inconclusive	24-Aug-09	03:09P
474	Calibration	*	*	*	*	*	1.031	0.915	Inconclusive	24-Aug-09	03:09P
475	Calibration	*	*	*	*	*	0.953	0.891	Inconclusive	24-Aug-09	03:10P
476	Calibration	*	*	*	*	*	0.944	0.93	Inconclusive	24-Aug-09	03:11P

APPENDIX C: Certifications and Lead Hazard Evaluation Form

State of California Department of Public Health

Lead-Related Construction Certificate	Certificate Type	Expiration Date
	Inspector/Assessor	08/28/2010

Terri A. MacFarlane ID #: **5666**

State of California—Health and Human Ser , Agency

California Department of Public Health

LEAD HAZARD EVALUATION REPORT E09-694

Section 1 — Date of Lead Hazard Evaluation 8/24/09

Section 2 — Type of Lead Hazard Evaluation (Check one box only)

☒ Lead Inspection ☐ Risk assessment ☐ Clearance Inspection ☐ Other (specify) _____

Section 3 — Structure Where Lead Hazard Evaluation Was Conducted

Address [number, street, apartment (if applicable)]	City	County	Zip Code
THE PRESIDIO - BLDG. 228	SAN FRANCISCO	SAN FRANCISCO	94623

Construction date (year) of structure	Type of structure		Children living in structure?
1909	☐ Multi-unit building ☐ Single family dwelling	☐ School or daycare ☒ Other MILITARY UNIT	☐ Yes ☒ No ☐ Don't Know

Section 4 — Owner of Structure (if business/agency, list contact person)

Name	Telephone number
DAVE KEBA - CAL - TRANS	510 - 286 - 5497

Address [number, street, apartment (if applicable)]	City	State	Zip Code
P.O. Box 23440	OAKLAND	CA	94623

Section 5 — Results of Lead Hazard Evaluation (check all that apply)

☐ No lead-based paint detected ☐ Intact lead-based paint detected ☒ Deteriorated lead-based paint detected

☐ No lead hazards detected ☐ Lead-contaminated dust found ☐ Lead-contaminated soil found ☐ Other_____

Section 6 — Individual Conducting Lead Hazard Evaluation

Name	Telephone number
Terri MacFarlane	(800) 988-7424

Address [number, street, apartment (if applicable)]	City	State	Zip Code
3732 Charter Park Dr Ste A	San Jose	CA	95136

CDPH certification number	Signature	Date
5666		9/24/09

Name and CDPH certification number of any other individuals conducting sampling or testing (if applicable)

MAP 4 M4-1433 M4-1365

Section 7 — Attachments

A. A foundation diagram or sketch of the structure indicating the specifc locations of each lead hazard or presence of lead-based paint;
B. Each testing method, device, and sampling procedure used;
C. All data collected, including quality control data, laboratory results, including laboratory name, address, and phone number.

First copy and attachments retained by inspector

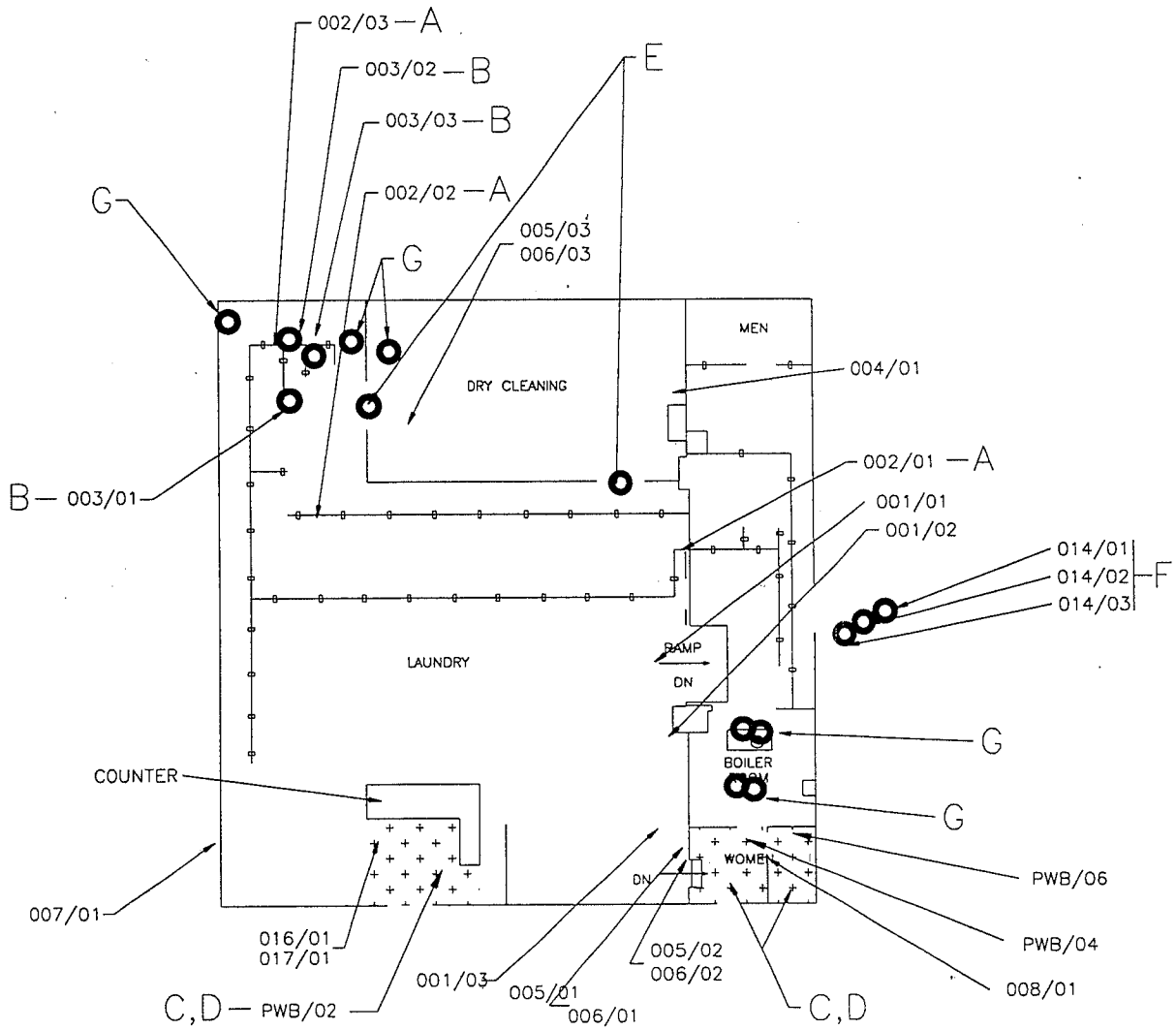
Second copy and attachments retained by owner

Third copy only (no attachments) mailed or faxed to:

California Department of Public Health
Childhood Lead Poisoning Prevention Branch Reports
850 Marina Bay Parkway, Building P, Third Floor
Richmond, CA 94804-6403
Fax: (510) 620-5656

CDPH 8552 (6/07)

APPENDIX E: Diagram



FIRST FLOOR
SCALE: 1/16" = 1'-0"

APPENDIX D: Previous Survey Information

Versar INC.

FINAL REPORT
BUILDING 0228
ASBESTOS MATERIALS RE-SURVEY AND LEAD-BASED PAINT INVESTIGATION
PRESIDIO OF SAN FRANCISCO
SAN FRANCISCO, CALIFORNIA

CONTRACT NUMBER DACA05-87-C-0188
MODIFICATION P00008

Prepared for:

U.S. ARMY CORPS OF ENGINEERS
SACRAMENTO DISTRICT
1325 J STREET
SACRAMENTO, CALIFORNIA 95814-2922

Prepared by:

VERSAR, INC.
1255 HARBOR BAY PARKWAY
SUITE 100
ALAMEDA, CALIFORNIA 94502

Versar Project Number 2901

January 24, 1996

Versar INC.

TABLE OF CONTENTS

1.0 BUILDING DESCRIPTION

2.0 ASBESTOS MATERIAL SURVEY

2.1 Approach
2.2 Building Material Bulk Sample Summary
2.3 Hazard Assessments and Recommended Corrective Actions

TABLES

Table A Asbestos Building Data Summary

FIGURES

Figure A Asbestos Survey Drawings

REFERENCES

APPENDICES

Introduction to Appendices A-D
Appendix A Statement of Limitations
Appendix B ACM Exposure Hazard Assessment
Appendix C ACM Laboratory Reports
Appendix D ACM Chain of Custody Records

Versar INC.

1.0 BUILDING DESCRIPTION

Building 0228 is a Dry Cleaners and was constructed in 1909. The building has an approximate area of 4,100 square feet and consists of one floor. No asbestos abatement records were available for Building 0228; however, tank insulation observed during the previous survey was not observed during the current survey and is assumed abated.

Building 0228 is a brick structure on a concrete block foundation. The exterior walls of the building are brick. The roof system consists of asphalt shingles over a felt underlay. Interior construction materials include concrete block, fiberboard, wood, and lath and plaster walls; wood and lath and plaster ceilings; and concrete and vinyl floor tile (VFT) flooring. Heating is provided by ceiling-mounted space heaters.

2.0 ASBESTOS MATERIAL SURVEY

2.1 Approach

Versar, Inc. (Versar) conducted a survey of Building 0228 for asbestos-containing materials (ACM) in 1995, under contract with the U.S. Army Corps of Engineers, Sacramento District. This survey expands on and incorporates data from a 1988-1989 asbestos screening survey of the Presidio of San Francisco, also conducted by Versar. During the current survey, Versar visually inspected all readily accessible areas of the building, identified homogeneous areas of suspect material, and collected representative samples of suspect material for laboratory analysis. Flooring materials and most asphalt roofing materials were assumed to contain asbestos and were not sampled unless significantly damaged. All sampling and inspection activities were performed in accordance with the *Presidio of San Francisco, Asbestos Materials and Lead-Based Paint Resurvey, Preliminary Survey Submittal, Quality Assurance Control Program* and the *Presidio of San Francisco, Asbestos Materials and Lead-Based Paint Resurvey, Safety and Health Plan* and are subject to the Statement of Limitations presented as Appendix A.

Where ACM was identified in the interior of buildings, Versar conducted a qualitative assessment of potential risk to human health. The qualitative assessment considers the ACM's physical damage, water damage, distance from repairs, potential for contact, total area, barriers, population, friability, ventilation, air movement, activity, asbestos content, and type of material. The qualitative assessment produces a hazard rank ranging from 1, which represents the most risk to human health, to 6, which represents the least risk to human health. Versar also presents recommended response actions based on the ACM's assessed risk. Hazard ranks are not developed for exterior materials; however, Versar does provide recommended response actions for these materials. These recommendations represent Versar's professional judgement based upon industry standards and conditions existing at the time of the survey. The ACM Exposure Hazard Assessment is included as Appendix B. The ACM Laboratory Reports and ACM Chain of Custody Records are presented as Appendix C and Appendix D, respectively.

Cost estimates for removal of each individual positive and assumed ACM were calculated from unit costs collected from local abatement contractors. Cost estimates are based on removal of individual materials. Removal of a combination of materials could increase or decrease the total cost. For small quantities of materials with removal costs less than $1,500.00 a minimum cost of $1,500.00 was applied to the material to account for fixed costs such as mobilization.

2.2 Building Material Bulk Sample Summary

Twenty-eight (28) samples of suspect ACM including pipe wrap, fittings, debris, plaster, window putty, fiberboard, asphalt shingles, VFT mastic, vinyl baseboard, and vinyl baseboard mastic were collected from the building. Seven (7) suspect ACM including asphalt shingles, felt paper, VFT, VFT mastic, fire doors, gasket, and roofing tar were assumed to contain asbestos. The sample locations and the laboratory results are presented in Figure A and Table A, respectively. The materials which were identified as containing asbestos, as well as those materials that were not sampled but were assumed to contain asbestos, are discussed further in Section 2.3.

2.3 Hazard Assessments and Recommended Corrective Action

The ACM identified or assumed in Building 0228 include pipe wrap, fittings, asphalt shingles, felt paper, VFT, VFT mastic, fire doors, gasket, and roofing tar.

Versar recommends that an ACM Operations and Maintenance (O&M) Program be developed at the Presidio of San Francisco. The O&M Program should include the procedures for managing the specific ACM identified, and should be incorporated into the normal operating procedures for The Presidio of San Francisco. The components of the O&M Program should include the locations of all ACM, reporting procedures, notifications to all contractors who perform work such as repairs to the heating, ventilation, and air conditioning (HVAC) systems, plumbing, electrical repairs, telephone repairs, or janitorial services. The O&M Program should provide the acceptable procedures for working with or near ACM and should also provide for the periodic reinspection of the materials by a person

qualified to evaluate current conditions. In addition to the O&M Program, other recommended response actions are also provided in this report. Recommendations may include removal, repair, encapsulation, enclosure, or periodic inspection to ensure that the condition of the material has not changed. Asbestos-related activities should be performed in accordance with all federal, state, and local regulations.

The asbestos-containing pipe wrap located throughout the building is assigned a friability rating of "low" and a damage rating of "none". Bulk samples of this material were collected and found to contain 30-35 percent chrysotile asbestos. This material has a hazard rank of 4. Versar recommends conducting periodic inspections of the material as part of an O&M Program for proper management.

The asbestos-containing fittings located in the laundry area is assigned a friability rating of "high" and a damage rating of "low". Bulk samples of this material were collected and found to contain 1-15 percent chrysotile, 10-20 percent amosite, and 1-5 percent crocidolite asbestos. This material has a hazard rank of 4. Versar recommends repairing the damaged fittings and conducting periodic inspections of the material as part of an O&M Program for proper management.

The asbestos-containing asphalt shingles located over the entire roof are assigned a friability rating of "nonfriable" and a damage rating of "none". Bulk samples of this material were collected during the 1988-1989 asbestos screening survey and laboratory analysis did not detect asbestos in the samples collected. However, according to the protocol for the 1995 asbestos survey, this material is assumed to be an ACM. This material is located on the exterior of the building; therefore, a hazard rank is not applicable. Versar recommends incorporating the material into an O&M Program for proper management. In addition, Versar recommends that sampling be performed to confirm the presence or absence of asbestos prior to any renovation or demolition that would disturb this material.

The asbestos-containing felt paper located beneath the asphalt shingles is assigned a friability rating of "nonfriable" and a damage rating of "none". Although no bulk samples of this material were collected, the material is assumed to contain asbestos. This material is

located on the exterior of the building; therefore, a hazard rank is not applicable. Versar recommends incorporating the material into an O&M Program for proper management. In addition, Versar recommends that sampling be performed to confirm the presence or absence of asbestos prior to any renovation or demolition that would disturb this material.

The asbestos-containing VFT located in the restroom and part of the laundry room is assigned a friability rating of "nonfriable" and a damage rating of "none". Although no bulk samples of this material were collected, the material is assumed to contain asbestos. This material has a hazard rank of 5. Versar recommends conducting periodic inspections of this material as part of an O&M Program for proper management. Versar further recommends that individuals in these areas be instructed to refrain from any activity which could disturb the asbestos-containing VFT. This includes cutting, sanding, abrading, drilling, crushing, and any other activity having the potential to disturb the material. In addition, Versar recommends that sampling be performed to confirm the presence or absence of asbestos prior to any renovation or demolition that would disturb this material.

The asbestos-containing VFT mastic located in the restroom and part of the laundry room is assigned a friability rating of "nonfriable" and a damage rating of "none". Bulk samples of this material were collected during the 1988-1989 asbestos screening survey and were found to contain 1-10 percent asbestos. According to the protocol for the 1995 asbestos survey, this material is assumed to be an ACM. This material has a hazard rank of 6. Versar recommends incorporating the material into an O&M Program for proper management. Versar further recommends that individuals in these areas be instructed to refrain from any activity which could disturb the asbestos-containing VFT mastic. This includes cutting, sanding, abrading, drilling, crushing, and any other activity having the potential to disturb the material. In addition, Versar recommends that sampling be performed to confirm the presence or absence of asbestos prior to any renovation or demolition that would disturb this material.

The asbestos-containing fire doors located in the dry cleaning section are assigned a friability rating of "nonfriable" and a damage rating of "none". Although no bulk samples of

this material were collected, the material is assumed to contain asbestos. This material has a hazard rank of 6. Versar recommends incorporating the material into an O&M Program for proper management. In addition, Versar recommends that sampling be performed to confirm the presence or absence of asbestos prior to any renovation or demolition that would disturb this material.

The asbestos-containing pipe wrap located by the boiler room both inside the structure and outside the structure is assigned a friability rating of "medium" and a damage rating of "low". Bulk samples of this material were collected and found to contain 60-65 percent chrysotile asbestos. This material has a hazard rank of 1. Versar recommends immediate removal of the material. Versar additionally recommends that access into the area be restricted to properly licensed and qualified asbestos personnel prior to the removal of this asbestos-containing pipe wrap.

The asbestos-containing gaskets located in the boiler room, laundry, and the dry cleaning area are assigned a friability rating of "nonfriable" and a damage rating of "none". Although no bulk samples of this material were collected, the material is assumed to contain asbestos. This material has a hazard rank of 5. Versar recommends conducting periodic inspections of this material as part of an O&M Program for proper management. In addition, Versar recommends that sampling be performed to confirm the presence or absence of asbestos prior to any renovation or demolition that would disturb this material.

Versar INC.

TABLES

Versar INC.

FIGURES

TABLE A
ASBESTOS BUILDING DATA SUMMARY
PRESIDIO OF SAN FRANCISCO
BUILDING NO. 0228

Inspector: 1363/0002
Inspection Date: 04/18/95

HOMOGENEOUS AREA	MATERIAL	DAMAGE	FRIABILITY	HAZARD RANK	SAMPLE NUMBER	PERCENT ASBESTOS	ASBESTOS PRESENT	QUANTITY	UNIT	UNIT COST	ABATEMENT COST
1/0228/001	Pipe Wrap	NO	LOW	-	HA Summary	N.D.	N	23	LF	$10.00	$0
					1/0228/001/01	N.D.					
					1/0228/001/02	N.D.					
					1/0228/001/03	N.D.					
1/0228/002	Pipe Wrap	NO	LOW	4	HA Summary	30-35	Y	355	LF	$10.00	$3550
					1/0228/002/01	30-35					
					1/0228/002/02	30-35					
					1/0228/002/03	30-35					
1/0228/003	Fittings	LOW	HIGH	4	HA Summary	17-35	Y	10	EA	$18.00	$1500
					1/0228/003/01	17-30					
					1/0228/003/02	17-30					
					1/0228/003/03	21-35					
1/0228/004	Debris	MED	LOW	-	HA Summary	N.D.	N	4	SF	$2.00	$0
					1/0228/004/01	N.D.					
1/0228/005	Plaster	LOW	NONE	-	HA Summary	N.D.	N	748	SF	$4.50	$0
					1/0228/005/01	N.D.					
					1/0228/005/02	N.D.					
					1/0228/005/03	N.D.					
1/0228/006	Plaster	NO	LOW	-	HA Summary	N.D.	N	748	SF	$4.50	$0
					1/0228/006/01	N.D.					
					1/0228/006/02	N.D.					
					1/0228/006/03	N.D.					
1/0228/007	Window Putty	LOW	NONE	-	HA Summary	N.D.	N	1002	LF	$3.10	$0
					1/0228/007/01	N.D.					
1/0228/008	Fiberboard	NO	LOW	-	HA Summary	N.D.	N	113	SF	$3.00	$0
					1/0228/008/01	N.D.					
1/0228/009	Asphalt Shingles	NO	NONE	-	HA Summary	1-29	A	5880	SF	$2.00	$11760
					PWB-P00228-08	N.D.					
1/0228/010	Felt Paper	NO	NONE	-	HA Summary	1-29	A	5880	SF	$5.00	$29400
1/0228/011	Vinyl Floor Tile (VFT)	NO	NONE	5	HA Summary	1-29	A	200	SF	$1.50	$1500

N.D.=None Detected
N.A.=Not Analyzed

Y=Yes
N=No
A=Assumed
R=Removed

Cost estimated represents total area of asbestos containing material.
Insulation, flooring, etc. are priced as systems unless otherwise noted.

TABLE A
ASBESTOS BUILDING DATA SUMMARY
PRESIDIO OF SAN FRANCISCO
BUILDING NO. 0228

Inspector: 1363/0002
Inspection Date: 04/18/95

HOMOGENEOUS AREA	MATERIAL	DAMAGE	FRIABILITY	HAZARD RANK	SAMPLE NUMBER	PERCENT ASBESTOS	ASBESTOS PRESENT	QUANTITY	UNIT	UNIT COST	ABATEMENT COST
1/0228/012	VFT Mastic	NO	NONE	6	HA Summary PWB-P00228-02 PWB-P00228-04 PWB-P00228-06	1-29 5-10 1-5 1-5	A	200	SF	$1.10	$1500
1/0228/013	Fire Doors	NO	NONE	6	HA Summary	1-29	A	2	EA	$100.00	$1500
1/0228/014	Pipe Wrap	LOW	MED	1	HA Summary 1/0228/014/01 1/0228/014/02 1/0228/014/03	60-65 60-65 60-65 60-65	Y	7	LF	$10.00	$1500
1/0228/015	Gasket	NO	NONE	5	HA Summary	1-29	A	12	LF	$20.00	$1500
1/0228/016	Vinyl Baseboard	NO	NONE	-	HA Summary 1/0228/016/01	N.D. N.D.	N	26	LF	$2.50	$0
1/0228/017	Vinyl Baseboard Mastic	NO	NONE	-	HA Summary 1/0228/017/01	N.D. N.D.	N	26	LF	$2.50	$0
1/0228/018	Roofing Tar	NO	NONE	-	HA Summary PWB-P00228-09	1-29 5-10	A	25	SF	$3.50	$1500
									GRAND TOTAL		$55210

N.D.=None Detected
N.A.=Not Analyzed

Y=Yes
N=No
A=Assumed
R=Removed

Cost estimated represents total area of asbestos containing material.
Insulation, flooring, etc. are priced as systems unless otherwise noted.

Versar INC.

INTRODUCTION TO APPENDICES A-D

Versar INC.

REFERENCES

1. Versar, Inc. Presidio of San Francisco, Asbestos Materials and Lead-Based Paint Resurvey, Preliminary Survey Submittal, Quality Assurance Control Program. March 1995.

2. Versar, Inc. Presidio of San Francisco, Asbestos Materials and Lead-Based Paint Resurvey, Safety and Health Plan. March 1995.

3. Versar, Inc. Project Executive Summary. March 1996.

4. Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing. June 1995.

Versar INC.

INTRODUCTION TO APPENDICES A-D

Appendix A - Statement of Limitations

Appendix A provides the Versar Statement of Limitations as it applies to asbestos-containing materials surveys, lead-based paint surveys, and soil sampling for lead. Additional limitations as well as inspection protocols are presented in Versar's *Project Executive Summary* (Versar, Inc. 1995).

Appendix B - ACM Exposure Hazard Assessment

Appendix B presents individual damage and exposure factor rankings, the totals for the damage and exposure factors, and the resultant hazard ranking for each identified ACM.

Appendix C - ACM Laboratory Reports

Appendix C provides laboratory reports for each ACM bulk sample collected. Included in the report is the field sample ID, laboratory sample ID, dates of sample collection and analysis, and the result of the analysis. If there are unusual findings or discrepancies, they will be listed following the analytical results.

Appendix D - ACM Chain of Custody Records

Appendix D provides the chain of custody records that were used to ensure the proper handling and shipment of ACM bulk samples.

Versar INC.

APPENDIX A

Statement of Limitations

Versar INC.

STATEMENT OF LIMITATIONS

The data presented and the opinions expressed in this report are qualified as follows:

- The sole purpose of the investigation and of this report is to assess the Site with respect to asbestos and/or lead-based paint materials as defined in Versar's Scope of Work and the applicable state and federal environmental laws and regulations.

- Versar derived the data in this report primarily from visual inspections, interviews with individuals with information about the Site, and a limited number of environmental samples. The passage of time, manifestation of latent conditions, or occurrence of future events may require further exploration at the Site, analysis of the data, and reevaluation of the findings, observations, conclusions, and recommendations expressed in the report.

- In preparing this report, Versar has relied upon and presumed accurate certain information (or the absence thereof) about the Site provided by the Client, and others identified herein. Except as otherwise stated in the report, Versar has not attempted to verify the accuracy or completeness of such information.

- The data reported and the findings, observations, conclusions, and recommendations expressed in the report are limited by the Scope of Services, including the extent of environmental sampling and other tests. The Scope of Services was defined by the requests of the Client, the time and budgetary constraints imposed by the Client, and the availability of access to the Site.

- Because of the limitations stated above, the findings, observations, conclusions and recommendations expressed by Versar in this report are limited to the information obtained and the surface and subsurface investigation undertaken and should not be considered an opinion concerning the compliance of any past or current owner or operator of the Site with any federal, state, or local law or regulation. No warranty or guarantee, whether express or implied, is made with respect to the data reported or findings, observations, conclusions, and recommendations expressed in this report. Further, such data, findings, observations, conclusions, and recommendations are based solely upon Site conditions in existence at the time of investigation.

- This report has been prepared on behalf of and for the exclusive use of the Client, and is subject to and issued in connection with the Agreement and the provisions thereof.

Versar INC.

APPENDIX B

ACM Exposure Hazard Assessment

Appendix B - ACM Exposure Hazard Assessment
Presidio of San Francisco
Asbestos Survey

Building number : 0228
Homogeneous Area : 1/0228/001
Dry Cleaners, Presidio

Inspection Date: 04/18/95
Inspector(s): 1363/0002

Material Code: 564
Material Description: Pipe Wrap

	DAMAGE		EXPOSURE
Physical Damage:	0	Friable:	1
Water Damage:	0	Area:	1
Distance From Repairs:	0	Walls:	3
Material:	1	Ventilation:	0
Potential for Contact:	2	Air Movement:	0
Asbestos Content:	0	Activity:	0
		Floor:	1
		Barriers:	4
		Population:	1
Total Damage:	3	Total Exposure:	11

Hazard Rank: -

Appendix B - ACM Exposure Hazard Assessment
Presidio of San Francisco
Asbestos Survey

Building number : 0228
Homogeneous Area : 1/0228/002
Dry Cleaners, Presidio

Inspection Date: 04/18/95
Inspector(s): 1363/0002

Material Code: 564
Material Description: Pipe Wrap

	DAMAGE		EXPOSURE
Physical Damage:	0	Friable:	1
Water Damage:	0	Area:	2
Distance From Repairs:	3	Walls:	3
Material:	1	Ventilation:	0
Potential for Contact:	2	Air Movement:	0
Asbestos Content:	3	Activity:	0
		Floor:	1
		Barriers:	4
		Population:	1
Total Damage:	9	Total Exposure:	12

Hazard Rank: 4

Appendix B - ACM Exposure Hazard Assessment
Presidio of San Francisco
Asbestos Survey

Building number : 0228
Homogeneous Area : 1/0228/003
Dry Cleaners, Presidio

Inspection Date: 04/18/95
Inspector(s): 1363/0002

Material Code: 106
Material Description: Fittings

	DAMAGE		EXPOSURE
Physical Damage:	2	Friable:	6
Water Damage:	0	Area:	0
Distance From Repairs:	2	Walls:	3
Material:	0	Ventilation:	0
Potential for Contact:	2	Air Movement:	0
Asbestos Content:	3	Activity:	0
		Floor:	1
		Barriers:	2
		Population:	1
Total Damage:	9	Total Exposure:	13

Hazard Rank: 4

Appendix B - ACM Exposure Hazard Assessment
Presidio of San Francisco
Asbestos Survey

Building number : 0228
Homogeneous Area : 1/0228/004
Dry Cleaners, Presidio

Inspection Date: 04/18/95
Inspector(s): 1363/0002

Material Code: 506
Material Description: Debris

	DAMAGE		EXPOSURE
Physical Damage:	4	Friable:	1
Water Damage:	0	Area:	0
Distance From Repairs:	0	Walls:	3
Material:	3	Ventilation:	0
Potential for Contact:	2	Air Movement:	0
Asbestos Content:	0	Activity:	0
		Floor:	1
		Barriers:	4
		Population:	1
Total Damage:	9	Total Exposure:	10

Hazard Rank: -

Appendix B - ACM Exposure Hazard Assessment
Presidio of San Francisco
Asbestos Survey

Building number : 0228
Homogeneous Area : 1/0228/005
Dry Cleaners, Presidio

Inspection Date: 04/18/95
Inspector(s): 1363/0002

Material Code: 305
Material Description: Plaster

	DAMAGE		EXPOSURE
Physical Damage:	2	Friable:	0
Water Damage:	0	Area:	2
Distance From Repairs:	3	Walls:	3
Material:	1	Ventilation:	0
Potential for Contact:	2	Air Movement:	0
Asbestos Content:	0	Activity:	0
		Floor:	1
		Barriers:	2
		Population:	1
Total Damage:	8	Total Exposure:	9

Hazard Rank: -

Appendix B - ACM Exposure Hazard Assessment
Presidio of San Francisco
Asbestos Survey

Building number : 0228
Homogeneous Area : 1/0228/006
Dry Cleaners, Presidio

Inspection Date: 04/18/95
Inspector(s): 1363/0002

Material Code: 305
Material Description: Plaster

	DAMAGE		EXPOSURE
Physical Damage:	0	Friable:	1
Water Damage:	0	Area:	2
Distance From Repairs:	3	Walls:	3
Material:	1	Ventilation:	0
Potential for Contact:	2	Air Movement:	0
Asbestos Content:	0	Activity:	0
		Floor:	1
		Barriers:	2
		Population:	1
Total Damage:	6	Total Exposure:	10

Hazard Rank: -

Appendix B - ACM Exposure Hazard Assessment
Presidio of San Francisco
Asbestos Survey

Building number : 0228
Homogeneous Area : 1/0228/007
Dry Cleaners, Presidio

Inspection Date: 04/18/95
Inspector(s): 1363/0002

Material Code: 569
Material Description: Window Putty

	DAMAGE		EXPOSURE
Physical Damage:	2	Friable:	0
Water Damage:	-	Area:	-
Distance From Repairs:	-	Walls:	-
Material:	1	Ventilation:	-
Potential for Contact:	-	Air Movement:	-
Asbestos Content:	0	Activity:	-
		Floor:	-
		Barriers:	-
		Population:	-
Total Damage:	3	Total Exposure:	0

Hazard Rank: -

Appendix B - ACM Exposure Hazard Assessment
Presidio of San Francisco
Asbestos Survey

Building number : 0228
Homogeneous Area : 1/0228/008
Dry Cleaners, Presidio

Inspection Date: 04/18/95
Inspector(s): 1363/0002

Material Code: 559
Material Description: Fiberboard

	DAMAGE		EXPOSURE
Physical Damage:	0	Friable:	1
Water Damage:	0	Area:	2
Distance From Repairs:	0	Walls:	2
Material:	1	Ventilation:	0
Potential for Contact:	2	Air Movement:	0
Asbestos Content:	0	Activity:	0
		Floor:	1
		Barriers:	2
		Population:	1
Total Damage:	3	Total Exposure:	9

Hazard Rank: -

Appendix B - ACM Exposure Hazard Assessment
Presidio of San Francisco
Asbestos Survey

Building number : 0228
Homogeneous Area : 1/0228/009
Dry Cleaners, Presidio

Inspection Date: 04/18/95
Inspector(s): 1363/0002

Material Code: 553
Material Description: Asphalt Shingles

	DAMAGE		EXPOSURE
Physical Damage:	0	Friable:	0
Water Damage:	-	Area:	-
Distance From Repairs:	-	Walls:	-
Material:	0	Ventilation:	-
Potential for Contact:	-	Air Movement:	-
Asbestos Content:	1	Activity:	-
		Floor:	-
		Barriers:	-
		Population:	-
Total Damage:	1	Total Exposure:	0

Hazard Rank: -

Appendix B - ACM Exposure Hazard Assessment
Presidio of San Francisco
Asbestos Survey

Building number : 0228
Homogeneous Area : 1/0228/010
Dry Cleaners, Presidio

Inspection Date: 04/18/95
Inspector(s): 1363/0002

Material Code: 542
Material Description: Felt Paper

	DAMAGE		EXPOSURE
Physical Damage:	0	Friable:	0
Water Damage:	-	Area:	-
Distance From Repairs:	-	Walls:	-
Material:	1	Ventilation:	-
Potential for Contact:	-	Air Movement:	-
Asbestos Content:	1	Activity:	-
		Floor:	-
		Barriers:	-
		Population:	-
Total Damage:	2	Total Exposure:	0

Hazard Rank: -

Appendix B - ACM Exposure Hazard Assessment
Presidio of San Francisco
Asbestos Survey

Building number : 0228
Homogeneous Area : 1/0228/011
Dry Cleaners, Presidio

Inspection Date: 04/18/95
Inspector(s): 1363/0002

Material Code: 513
Material Description: Vinyl Floor Tile (VFT)

	DAMAGE		EXPOSURE
Physical Damage:	0	Friable:	0
Water Damage:	0	Area:	2
Distance From Repairs:	0	Walls:	3
Material:	1	Ventilation:	0
Potential for Contact:	2	Air Movement:	0
Asbestos Content:	1	Activity:	0
		Floor:	1
		Barriers:	4
		Population:	1
Total Damage:	4	Total Exposure:	11

Hazard Rank: 5

Appendix B - ACM Exposure Hazard Assessment
Presidio of San Francisco
Asbestos Survey

Building number : 0228
Homogeneous Area : 1/0228/012
Dry Cleaners, Presidio

Inspection Date: 04/18/95
Inspector(s): 1363/0002

Material Code: 572
Material Description: VFT Mastic

	DAMAGE		EXPOSURE
Physical Damage:	0	Friable:	0
Water Damage:	0	Area:	2
Distance From Repairs:	0	Walls:	3
Material:	0	Ventilation:	0
Potential for Contact:	2	Air Movement:	0
Asbestos Content:	1	Activity:	0
		Floor:	1
		Barriers:	1
		Population:	1
Total Damage:	3	Total Exposure:	8

Hazard Rank: 6

Appendix B - ACM Exposure Hazard Assessment
Presidio of San Francisco
Asbestos Survey

Building number : 0228
Homogeneous Area : 1/0228/013
Dry Cleaners, Presidio

Inspection Date: 04/18/95
Inspector(s): 1363/0002

Material Code: 507
Material Description: Fire Doors

	DAMAGE		EXPOSURE
Physical Damage:	0	Friable:	0
Water Damage:	0	Area:	0
Distance From Repairs:	0	Walls:	3
Material:	0	Ventilation:	0
Potential for Contact:	2	Air Movement:	0
Asbestos Content:	1	Activity:	0
		Floor:	1
		Barriers:	1
		Population:	1
Total Damage:	3	Total Exposure:	6

Hazard Rank: 6

Appendix B - ACM Exposure Hazard Assessment
Presidio of San Francisco
Asbestos Survey

Building number : 0228
Homogeneous Area : 1/0228/014
Dry Cleaners, Presidio

Inspection Date: 04/18/95
Inspector(s): 1363/0002

Material Code: 564
Material Description: Pipe Wrap

	DAMAGE		EXPOSURE
Physical Damage:	2	Friable:	3
Water Damage:	0	Area:	0
Distance From Repairs:	2	Walls:	3
Material:	1	Ventilation:	0
Potential for Contact:	8	Air Movement:	5
Asbestos Content:	5	Activity:	2
		Floor:	1
		Barriers:	4
		Population:	2
Total Damage:	18	Total Exposure:	20

Hazard Rank: 1

Appendix B - ACM Exposure Hazard Assessment
Presidio of San Francisco
Asbestos Survey

Building number : 0228
Homogeneous Area : 1/0228/015
Dry Cleaners, Presidio

Inspection Date: 04/18/95
Inspector(s): 0002/1363

Material Code: 508
Material Description: Gasket

	DAMAGE		EXPOSURE
Physical Damage:	0	Friable:	0
Water Damage:	0	Area:	1
Distance From Repairs:	2	Walls:	3
Material:	0	Ventilation:	0
Potential for Contact:	2	Air Movement:	0
Asbestos Content:	1	Activity:	0
		Floor:	1
		Barriers:	4
		Population:	1
Total Damage:	5	Total Exposure:	10

Hazard Rank: 5

Appendix B - ACM Exposure Hazard Assessment
Presidio of San Francisco
Asbestos Survey

Building number : 0228
Homogeneous Area : 1/0228/016
Dry Cleaners, Presidio

Inspection Date: 04/18/95
Inspector(s): 1363/0002

Material Code: 541
Material Description: Vinyl Baseboard

	DAMAGE		EXPOSURE
Physical Damage:	0	Friable:	0
Water Damage:	0	Area:	1
Distance From Repairs:	0	Walls:	3
Material:	0	Ventilation:	0
Potential for Contact:	2	Air Movement:	0
Asbestos Content:	0	Activity:	0
		Floor:	1
		Barriers:	4
		Population:	1
Total Damage:	2	Total Exposure:	10

Hazard Rank: -

Appendix B - ACM Exposure Hazard Assessment
Presidio of San Francisco
Asbestos Survey

Building number : 0228
Homogeneous Area : 1/0228/017
Dry Cleaners, Presidio

Inspection Date: 04/18/95
Inspector(s): 1363/0002

Material Code: 570
Material Description: Vinyl Baseboard Mastic

	DAMAGE		EXPOSURE
Physical Damage:	0	Friable:	0
Water Damage:	0	Area:	1
Distance From Repairs:	0	Walls:	3
Material:	0	Ventilation:	0
Potential for Contact:	2	Air Movement:	0
Asbestos Content:	0	Activity:	0
		Floor:	1
		Barriers:	1
		Population:	1
Total Damage:	2	Total Exposure:	7

Hazard Rank: -

Versar INC.

APPENDIX C

ACM Laboratory Reports

Versar INC
NVLAP Accreditation # 1122

Field Bulk Sample # : 1/0228/001/01

LABORATORY REPORT - BULK ASBESTOS ANALYSIS

Site : Presidio of San Francisco
Project Name : Installation Asbestos Survey
Project Number : 2901
Client : U.S. Army Corps of Engineers

Material Code #: 564	Material Description: PIPE WRAP	
Laboratory Sample #: ASB95 - 3090	Batch #: 153	Matrix : BULK

DATES:
Received: 04/21/95 Collected: 04/18/95 Reported: 04/27/95

GROSS DESCRIPTION : Friable [X] Fibrous [X] Homogenous [X]

COLOR/APPEARANCE : TAN

ASBESTOS CONTENT

Chrysotile	%
Amosite	%
Crocidolite	%
Tremolite	%
Actinolite	%
Anthophyllite	%

NON-ASBESTOS/FIBROUS CONTENT

[CELLULOSE]	75-80	%
[FIBROUS GLASS]		%
[SYNTH. POLYMER]		%
[ ]		%
[ ]		%

NON-ASBESTOS/NON-FIBROUS CONTENT

[BIND. MATERIAL]	15-20	%

TOTAL PERCENT ASBESTOS: N.D. %

COMMENTS:

Method: Polarized Light Microscopy/Dispersion Staining (PLM)
40 CFR Part 763 App. A to Subpart F

* N.D. = None Detected (Method Detection Limit is 1%); Trace = Less 1%
* If sample is not homogeneous, separate components are analyzed separately and a single result is reported.
* Lab measurements and supporting documentation are available upon request.
* This report relates only to items tested.
* This report must not be used to claim product endorsement by NVLAP or any agency of the U.S. Government.
* Dust, tile, and vinyl may contain asbestos fibers that cannot be detected with PLM. If greater certainty concerning asbestos content is desired, electron microscopy or XRD is recommended.

MARCIE DILKS
NVLAP Signatory

R.A. CLARKE
Asbestos Analyst

6850 VERSAR CENTER • P.O. BOX 1549 • SPRINGFIELD, VIRGINIA 22151 • TELEPHONE: (703) 750-3000

Versar INC.
NVLAP Accreditation # 1122

Field Bulk Sample # : 1/0228/001/02

LABORATORY REPORT - BULK ASBESTOS ANALYSIS

Site : Presidio of San Francisco
Project Name : Installation Asbestos Survey
Project Number : 2901
Client : U.S. Army Corps of Engineers

Material Code #: 564	Material Description: PIPE WRAP		
Laboratory Sample #: ASB95 - 3091		Batch #: 153	Matrix : BULK

DATES:
Received: 04/21/95 Collected: 04/18/95 Reported: 04/27/95

GROSS DESCRIPTION : Friable [X] Fibrous [X] Homogenous [X]

COLOR/APPEARANCE : TAN

ASBESTOS CONTENT

Chrysotile	%
Amosite	%
Crocidolite	%
Tremolite	%
Actinolite	%
Anthophyllite	%

NON-ASBESTOS/FIBROUS CONTENT

[CELLULOSE]	75-80	%
[FIBROUS GLASS]		%
[SYNTH. POLYMER]		%
[ ]		%
[ ]		%

NON-ASBESTOS/NON-FIBROUS CONTENT

[BIND. MATERIAL]	15-20	%

TOTAL PERCENT ASBESTOS: N.D. %

COMMENTS:

Method: Polarized Light Microscopy/Dispersion Staining (PLM)
40 CFR Part 763 App. A to Subpart F

* N.D. = None Detected (Method Detection Limit is 1%); Trace = Less 1%
* If sample is not homogeneous, separate components are analyzed separately and a single result is reported.
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* This report relates only to items tested.
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MARCIE DILKS
NVLAP Signatory

R.A. CLARKE
Asbestos Analyst

Versar INC
NVLAP Accreditation # 1122

Field Bulk Sample # : 1/0228/001/03

LABORATORY REPORT - BULK ASBESTOS ANALYSIS

Site : Presidio of San Francisco
Project Name : Installation Asbestos Survey
Project Number : 2901
Client : U.S. Army Corps of Engineers

Material Code #: 564	Material Description: PIPE WRAP	
Laboratory Sample #: ASB95 - 3092	Batch #: 153	Matrix : BULK

DATES:
Received: 04/21/95 Collected: 04/18/95 Reported: 04/27/95

GROSS DESCRIPTION : Friable [X] Fibrous [X] Homogenous [X]

COLOR/APPEARANCE : TAN

ASBESTOS CONTENT

Chrysotile	%
Amosite	%
Crocidolite	%
Tremolite	%
Actinolite	%
Anthophyllite	%

NON-ASBESTOS/FIBROUS CONTENT

[CELLULOSE]	70-75	%
[FIBROUS GLASS]		%
[SYNTH. POLYMER]		%
[ ]		%
[ ]		%

NON-ASBESTOS/NON-FIBROUS CONTENT

[BIND. MATERIAL] 20-25 %

TOTAL PERCENT ASBESTOS: N.D. %

COMMENTS:

Method: Polarized Light Microscopy/Dispersion Staining (PLM)
40 CFR Part 763 App. A to Subpart F

* N.D. = None Detected (Method Detection Limit is 1%); Trace = Less 1%
* If sample is not homogeneous, separate components are analyzed separately and a single result is reported.
* Lab measurements and supporting documentation are available upon request.
* This report relates only to items tested.
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* Dust, tile, and vinyl may contain asbestos fibers that cannot be detected with PLM. If greater certainty concerning asbestos content is desired, electron microscopy or XRD is recommended.

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Versar INC
NVLAP Accreditation # 1122

Field Bulk Sample # : 1/0228/002/01

LABORATORY REPORT - BULK ASBESTOS ANALYSIS

Site : Presidio of San Francisco
Project Name : Installation Asbestos Survey
Project Number : 2901
Client : U.S. Army Corps of Engineers

Material Code #: 564	Material Description: PIPE WRAP	
Laboratory Sample #: ASB95 - 3093	Batch #: 153	Matrix : BULK

DATES:
Received: 04/21/95 Collected: 04/18/95 Reported: 04/27/95

GROSS DESCRIPTION : Friable [X] Fibrous [X] Homogenous [X]

COLOR/APPEARANCE : LIGHT GRAY

ASBESTOS CONTENT

Chrysotile	30-35 %
Amosite	%
Crocidolite	%
Tremolite	%
Actinolite	%
Anthophyllite	%

NON-ASBESTOS/FIBROUS CONTENT

[CELLULOSE]		%
[FIBROUS GLASS]		%
[SYNTH. POLYMER]	40-45	%
[ ]		%
[ ]		%

NON-ASBESTOS/NON-FIBROUS CONTENT

[BIND. MATERIAL]	15-20	%

TOTAL PERCENT ASBESTOS: 30-35 %

COMMENTS:

Method: Polarized Light Microscopy/Dispersion Staining (PLM)
40 CFR Part 763 App. A to Subpart F

* N.D. = None Detected (Method Detection Limit is 1%); Trace = Less 1%
* If sample is not homogeneous, separate components are analyzed separately and a single result is reported.
* Lab measurements and supporting documentation are available upon request.
* This report relates only to items tested.
* This report must not be used to claim product endorsement by NVLAP or any agency of the U.S. Government.
* Dust, tile, and vinyl may contain asbestos fibers that cannot be detected with PLM. If greater certainty concerning asbestos content is desired, electron microscopy or XRD is recommended.

MARCIE DILKS
NVLAP Signatory

R.A. CLARKE
Asbestos Analyst

Versar INC
NVLAP Accreditation # 1122

Field Bulk Sample # : 1/0228/002/02

LABORATORY REPORT - BULK ASBESTOS ANALYSIS

Site : Presidio of San Francisco
Project Name : Installation Asbestos Survey
Project Number : 2901
Client : U.S. Army Corps of Engineers

Material Code #: 564	Material Description: PIPE WRAP		
Laboratory Sample #: ASB95 - 3094		Batch #: 153	Matrix : BULK

DATES:
Received: 04/21/95 Collected: 04/18/95 Reported: 04/27/95

GROSS DESCRIPTION : Friable [X] Fibrous [X] Homogenous [X]

COLOR/APPEARANCE : LIGHT GRAY

ASBESTOS CONTENT

Chrysotile	30-35	%
Amosite		%
Crocidolite		%
Tremolite		%
Actinolite		%
Anthophyllite		%

NON-ASBESTOS/FIBROUS CONTENT

[CELLULOSE]		%
[FIBROUS GLASS]		%
[SYNTH. POLYMER]	40-45	%
[ ]		%
[ ]		%

NON-ASBESTOS/NON-FIBROUS CONTENT

[BIND. MATERIAL]	15-20	%

TOTAL PERCENT ASBESTOS: 30-35 %

COMMENTS:

Method: Polarized Light Microscopy/Dispersion Staining (PLM)
40 CFR Part 763 App. A to Subpart F

* N.D. = None Detected (Method Detection Limit is 1%); Trace = Less 1%
* If sample is not homogeneous, separate components are analyzed separately and a single result is reported.
* Lab measurements and supporting documentation are available upon request.
* This report relates only to items tested.
* This report must not be used to claim product endorsement by NVLAP or any agency of the U.S. Government.
* Dust, tile, and vinyl may contain asbestos fibers that cannot be detected with PLM. If greater certainty concerning asbestos content is desired, electron microscopy or XRD is recommended.

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Versar INC.
NVLAP Accreditation # 1122

Field Bulk Sample # : 1/0228/002/03

LABORATORY REPORT - BULK ASBESTOS ANALYSIS

Site : Presidio of San Francisco
Project Name : Installation Asbestos Survey
Project Number : 2901
Client : U.S. Army Corps of Engineers

Material Code #: 564	Material Description: PIPE WRAP	
Laboratory Sample #: ASB95 - 3095	Batch #: 153	Matrix : BULK

DATES:
Received: 04/21/95 Collected: 04/18/95 Reported: 04/27/95

GROSS DESCRIPTION : Friable [X] Fibrous [X] Homogenous [X]

COLOR/APPEARANCE : LIGHT GRAY

ASBESTOS CONTENT

Chrysotile	30-35	%
Amosite		%
Crocidolite		%
Tremolite		%
Actinolite		%
Anthophyllite		%

NON-ASBESTOS/FIBROUS CONTENT

[CELLULOSE]		%
[FIBROUS GLASS]		%
[SYNTH. POLYMER]	35-40	%
[ ]		%
[ ]		%

NON-ASBESTOS/NON-FIBROUS CONTENT

[BIND. MATERIAL]	20-25	%

TOTAL PERCENT ASBESTOS: 30-35 %

COMMENTS:

Method: Polarized Light Microscopy/Dispersion Staining (PLM)
40 CFR Part 763 App. A to Subpart F

* N.D. = None Detected (Method Detection Limit is 1%); Trace = Less 1%
* If sample is not homogeneous, separate components are analyzed separately and a single result is reported.
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NVLAP Accreditation # 1122

Field Bulk Sample # : 1/0228/003/01

LABORATORY REPORT - BULK ASBESTOS ANALYSIS

Site : Presidio of San Francisco
Project Name : Installation Asbestos Survey
Project Number : 2901
Client : U.S. Army Corps of Engineers

Material Code #: 106	Material Description: FITTINGS		
Laboratory Sample #: ASB95 - 3096		Batch #: 153	Matrix : BULK

DATES:
Received: 04/21/95 Collected: 04/18/95 Reported: 04/27/95

GROSS DESCRIPTION : Friable [X] Fibrous [X] Homogenous [X]

COLOR/APPEARANCE : WHITE

ASBESTOS CONTENT

Chrysotile	1-5	%
Amosite	15-20	%
Crocidolite	1-5	%
Tremolite		%
Actinolite		%
Anthophyllite		%

NON-ASBESTOS/FIBROUS CONTENT

[CELLULOSE	]	%
[FIBROUS GLASS	]	%
[SYNTH. POLYMER	]	%
[	]	%
[	]	%

NON-ASBESTOS/NON-FIBROUS CONTENT

[BIND. MATERIAL] 65-70 %

TOTAL PERCENT ASBESTOS: 17-30 %

COMMENTS:

Method: Polarized Light Microscopy/Dispersion Staining (PLM)
40 CFR Part 763 App. A to Subpart F

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Field Bulk Sample # : 1/0228/003/02

LABORATORY REPORT - BULK ASBESTOS ANALYSIS

Site : Presidio of San Francisco
Project Name : Installation Asbestos Survey
Project Number : 2901
Client : U.S. Army Corps of Engineers

Material Code #: 106	Material Description: FITTINGS	
Laboratory Sample #: ASB95 - 3097	Batch #: 153	Matrix : BULK

DATES:
Received: 04/21/95 Collected: 04/18/95 Reported: 04/27/95

GROSS DESCRIPTION : Friable [X] Fibrous [X] Homogenous [X]

COLOR/APPEARANCE : WHITE

ASBESTOS CONTENT

Chrysotile	1-5	%
Amosite	15-20	%
Crocidolite	1-5	%
Tremolite		%
Actinolite		%
Anthophyllite		%

NON-ASBESTOS/FIBROUS CONTENT

[CELLULOSE	]	%
[FIBROUS GLASS	]	%
[SYNTH. POLYMER	]	%
[	]	%
[	]	%

NON-ASBESTOS/NON-FIBROUS CONTENT

[BIND. MATERIAL] 65-70 %

TOTAL PERCENT ASBESTOS: 17-30 %

COMMENTS:

Method: Polarized Light Microscopy/Dispersion Staining (PLM)
40 CFR Part 763 App. A to Subpart F

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Field Bulk Sample # : 1/0228/003/03

LABORATORY REPORT - BULK ASBESTOS ANALYSIS

Site : Presidio of San Francisco
Project Name : Installation Asbestos Survey
Project Number : 2901
Client : U.S. Army Corps of Engineers

Material Code #: 106	Material Description: FITTINGS	
Laboratory Sample #: ASB95 - 3098	Batch #: 153	Matrix : BULK

DATES:
Received: 04/21/95 Collected: 04/18/95 Reported: 04/27/95

GROSS DESCRIPTION : Friable [X] Fibrous [X] Homogenous [X]

COLOR/APPEARANCE : WHITE

ASBESTOS CONTENT

Chrysotile	10-15	%
Amosite	10-15	%
Crocidolite	1-5	%
Tremolite		%
Actinolite		%
Anthophyllite		%

NON-ASBESTOS/FIBROUS CONTENT

[CELLULOSE	]	%
[FIBROUS GLASS	]	%
[SYNTH. POLYMER	]	%
[	]	%
[	]	%

NON-ASBESTOS/NON-FIBROUS CONTENT

[BIND. MATERIAL	] 60-65	%

TOTAL PERCENT ASBESTOS: 21-35 %

COMMENTS:

Method: Polarized Light Microscopy/Dispersion Staining (PLM)
40 CFR Part 763 App. A to Subpart F

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Field Bulk Sample # : 1/0228/004/01

LABORATORY REPORT - BULK ASBESTOS ANALYSIS

Site : Presidio of San Francisco
Project Name : Installation Asbestos Survey
Project Number : 2901
Client : U.S. Army Corps of Engineers

Material Code #: 506	Material Description: DEBRIS		
Laboratory Sample #: ASB95 - 3099		Batch #: 154	Matrix : BULK

DATES:
Received: 04/21/95 Collected: 04/18/95 Reported: 04/28/95

GROSS DESCRIPTION : Friable [X] Fibrous [X] Homogenous [X]

COLOR/APPEARANCE : DARK GRAY

ASBESTOS CONTENT

Chrysotile	%
Amosite	%
Crocidolite	%
Tremolite	%
Actinolite	%
Anthophyllite	%

NON-ASBESTOS/FIBROUS CONTENT

[CELLULOSE]	35-40	%
[FIBROUS GLASS]		%
[SYNTH. POLYMER]	30-35	%
[ ]		%
[ ]		%

NON-ASBESTOS/NON-FIBROUS CONTENT

[BIND. MATERIAL]	20-25	%

TOTAL PERCENT ASBESTOS: N.D. %

COMMENTS:

Method: Polarized Light Microscopy/Dispersion Staining (PLM)
40 CFR Part 763 App. A to Subpart F

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Field Bulk Sample # : 1/0228/005/01

LABORATORY REPORT - BULK ASBESTOS ANALYSIS

Site : Presidio of San Francisco
Project Name : Installation Asbestos Survey
Project Number : 2901
Client : U.S. Army Corps of Engineers

Material Code #: 305	Material Description: PLASTER		
Laboratory Sample #: ASB95 - 3100		Batch #: 154	Matrix : BULK

DATES:
Received: 04/21/95 Collected: 04/18/95 Reported: 04/28/95

GROSS DESCRIPTION : Friable [X] Fibrous [ ] Homogenous [X]

COLOR/APPEARANCE : GRAY

ASBESTOS CONTENT

Chrysotile	%
Amosite	%
Crocidolite	%
Tremolite	%
Actinolite	%
Anthophyllite	%

NON-ASBESTOS/FIBROUS CONTENT

[CELLULOSE]	%
[FIBROUS GLASS]	%
[SYNTH. POLYMER]	%
[ ]	%
[ ]	%

NON-ASBESTOS/NON-FIBROUS CONTENT

[BIND. MATERIAL] 95-100 %

TOTAL PERCENT ASBESTOS: N.D. %

COMMENTS:

Method: Polarized Light Microscopy/Dispersion Staining (PLM)
40 CFR Part 763 App. A to Subpart F

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Field Bulk Sample # : 1/0228/005/02

LABORATORY REPORT - BULK ASBESTOS ANALYSIS

Site : Presidio of San Francisco
Project Name : Installation Asbestos Survey
Project Number : 2901
Client : U.S. Army Corps of Engineers

Material Code #: 305	Material Description: PLASTER		
Laboratory Sample #: ASB95 - 3101		Batch #: 154	Matrix : BULK

DATES:
Received: 04/21/95 Collected: 04/18/95 Reported: 04/28/95

GROSS DESCRIPTION : Friable [X] Fibrous [ ] Homogenous [ ]

COLOR/APPEARANCE : WHITE/GRAY

ASBESTOS CONTENT

Chrysotile	%
Amosite	%
Crocidolite	%
Tremolite	%
Actinolite	%
Anthophyllite	%

NON-ASBESTOS/FIBROUS CONTENT

[CELLULOSE]	%
[FIBROUS GLASS]	%
[SYNTH. POLYMER]	%
[ ]	%
[ ]	%

NON-ASBESTOS/NON-FIBROUS CONTENT

[BIND. MATERIAL] 95-100 %

TOTAL PERCENT ASBESTOS: N.D. %

COMMENTS:

Method: Polarized Light Microscopy/Dispersion Staining (PLM)
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Field Bulk Sample # : 1/0228/005/03

LABORATORY REPORT - BULK ASBESTOS ANALYSIS

Site : Presidio of San Francisco
Project Name : Installation Asbestos Survey
Project Number : 2901
Client : U.S. Army Corps of Engineers

Material Code #: 305	Material Description: PLASTER		
Laboratory Sample #: ASB95 - 3102		Batch #: 154	Matrix : BULK

DATES:
Received: 04/21/95 Collected: 04/18/95 Reported: 04/28/95

GROSS DESCRIPTION : Friable [X] Fibrous [ ] Homogenous [X]

COLOR/APPEARANCE : LIGHT GRAY

ASBESTOS CONTENT

Chrysotile	%
Amosite	%
Crocidolite	%
Tremolite	%
Actinolite	%
Anthophyllite	%

NON-ASBESTOS/FIBROUS CONTENT

[CELLULOSE]	%
[FIBROUS GLASS]	%
[SYNTH. POLYMER]	%
[ ]	%
[ ]	%

NON-ASBESTOS/NON-FIBROUS CONTENT

[BIND. MATERIAL] 95-100 %

TOTAL PERCENT ASBESTOS: N.D. %

COMMENTS:

Method: Polarized Light Microscopy/Dispersion Staining (PLM)
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Field Bulk Sample # : 1/0228/006/01

LABORATORY REPORT - BULK ASBESTOS ANALYSIS

Site : Presidio of San Francisco
Project Name : Installation Asbestos Survey
Project Number : 2901
Client : U.S. Army Corps of Engineers

Material Code #: 305	Material Description: PLASTER		
Laboratory Sample #: ASB95 - 3103		Batch #: 154	Matrix : BULK

DATES:
Received: 04/21/95 Collected: 04/18/95 Reported: 04/28/95

GROSS DESCRIPTION : Friable [X] Fibrous [ ] Homogenous [X]

COLOR/APPEARANCE : WHITE

ASBESTOS CONTENT

Chrysotile	%
Amosite	%
Crocidolite	%
Tremolite	%
Actinolite	%
Anthophyllite	%

NON-ASBESTOS/FIBROUS CONTENT

[CELLULOSE]	%
[FIBROUS GLASS]	%
[SYNTH. POLYMER]	%
[ ]	%
[ ]	%

NON-ASBESTOS/NON-FIBROUS CONTENT

[BIND. MATERIAL] 95-100 %

TOTAL PERCENT ASBESTOS: N.D. %

COMMENTS:

Method: Polarized Light Microscopy/Dispersion Staining (PLM)
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Field Bulk Sample # : 1/0228/006/02

LABORATORY REPORT - BULK ASBESTOS ANALYSIS

Site : Presidio of San Francisco
Project Name : Installation Asbestos Survey
Project Number : 2901
Client : U.S. Army Corps of Engineers

Material Code #: 305	Material Description: PLASTER		
Laboratory Sample #: ASB95 - 3104		Batch #: 154	Matrix : BULK

DATES:
Received: 04/21/95 Collected: 04/18/95 Reported: 04/28/95

GROSS DESCRIPTION : Friable [X] Fibrous [ ] Homogenous [X]

COLOR/APPEARANCE : WHITE

ASBESTOS CONTENT

Chrysotile	%
Amosite	%
Crocidolite	%
Tremolite	%
Actinolite	%
Anthophyllite	%

NON-ASBESTOS/FIBROUS CONTENT

[CELLULOSE]	%
[FIBROUS GLASS]	%
[SYNTH. POLYMER]	%
[ ]	%
[ ]	%

NON-ASBESTOS/NON-FIBROUS CONTENT

[BIND. MATERIAL] 95-100 %

TOTAL PERCENT ASBESTOS: N.D. %

COMMENTS:

Method: Polarized Light Microscopy/Dispersion Staining (PLM)
40 CFR Part 763 App. A to Subpart F

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Field Bulk Sample # : 1/0228/006/03

LABORATORY REPORT - BULK ASBESTOS ANALYSIS

Site : Presidio of San Francisco
Project Name : Installation Asbestos Survey
Project Number : 2901
Client : U.S. Army Corps of Engineers

Material Code #: 305	Material Description: PLASTER		
Laboratory Sample #: ASB95 - 3105		Batch #: 154	Matrix : BULK

DATES:
Received: 04/21/95 Collected: 04/18/95 Reported: 04/28/95

GROSS DESCRIPTION : Friable [X] Fibrous [ ] Homogenous [X]

COLOR/APPEARANCE : WHITE

ASBESTOS CONTENT

Chrysotile	%
Amosite	%
Crocidolite	%
Tremolite	%
Actinolite	%
Anthophyllite	%

NON-ASBESTOS/FIBROUS CONTENT

[CELLULOSE]	%
[FIBROUS GLASS]	%
[SYNTH. POLYMER]	%
[ ]	%
[ ]	%

NON-ASBESTOS/NON-FIBROUS CONTENT

[BIND. MATERIAL] 95-100 %

TOTAL PERCENT ASBESTOS: N.D. %

COMMENTS:

Method: Polarized Light Microscopy/Dispersion Staining (PLM)
40 CFR Part 763 App. A to Subpart F

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Field Bulk Sample # : 1/0228/007/01

LABORATORY REPORT - BULK ASBESTOS ANALYSIS

Site : Presidio of San Francisco
Project Name : Installation Asbestos Survey
Project Number : 2901
Client : U.S. Army Corps of Engineers

Material Code #: 569	Material Description: WINDOW PUTTY		
Laboratory Sample #: ASB95 - 3106		Batch #: 154	Matrix : BULK

DATES:
Received: 04/21/95 Collected: 04/18/95 Reported: 04/28/95

GROSS DESCRIPTION : Friable [X] Fibrous [ ] Homogenous [X]

COLOR/APPEARANCE : LIGHT TAN

ASBESTOS CONTENT

Chrysotile	%
Amosite	%
Crocidolite	%
Tremolite	%
Actinolite	%
Anthophyllite	%

NON-ASBESTOS/FIBROUS CONTENT

[CELLULOSE]	%
[FIBROUS GLASS]	%
[SYNTH. POLYMER]	%
[ ]	%
[ ]	%

NON-ASBESTOS/NON-FIBROUS CONTENT

[BIND. MATERIAL] 95-100 %

TOTAL PERCENT ASBESTOS: N.D. %

COMMENTS:

Method: Polarized Light Microscopy/Dispersion Staining (PLM)
40 CFR Part 763 App. A to Subpart F

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Field Bulk Sample # : 1/0228/008/01

LABORATORY REPORT - BULK ASBESTOS ANALYSIS

Site : Presidio of San Francisco
Project Name : Installation Asbestos Survey
Project Number : 2901
Client : U.S. Army Corps of Engineers

Material Code #: 559	Material Description: FIBERBOARD	
Laboratory Sample #: ASB95 - 3107	Batch #: 154	Matrix : BULK

DATES:
Received: 04/21/95 Collected: 04/18/95 Reported: 04/28/95

GROSS DESCRIPTION : Friable [X] Fibrous [X] Homogenous [X]

COLOR/APPEARANCE : LIGHT BROWN

ASBESTOS CONTENT

Chrysotile	%
Amosite	%
Crocidolite	%
Tremolite	%
Actinolite	%
Anthophyllite	%

NON-ASBESTOS/FIBROUS CONTENT

[CELLULOSE]	85-90	%
[FIBROUS GLASS]		%
[SYNTH. POLYMER]		%
[ ]		%
[ ]		%

NON-ASBESTOS/NON-FIBROUS CONTENT

[BIND. MATERIAL]	5-10	%

TOTAL PERCENT ASBESTOS: N.D. %

COMMENTS:

Method: Polarized Light Microscopy/Dispersion Staining (PLM)
40 CFR Part 763 App. A to Subpart F

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Field Bulk Sample # : 1/0228/014/01

LABORATORY REPORT - BULK ASBESTOS ANALYSIS

Site : Presidio of San Francisco
Project Name : Installation Asbestos Survey
Project Number : 2901
Client : U.S. Army Corps of Engineers

Material Code #: 564	Material Description: PIPE WRAP	
Laboratory Sample #: ASB95 - 3042	Batch #: 146	Matrix : BULK

DATES:
Received: 04/21/95 Collected: 04/18/95 Reported: 04/25/95

GROSS DESCRIPTION : Friable [X] Fibrous [X] Homogenous [X]

COLOR/APPEARANCE : GRAY

ASBESTOS CONTENT

Chrysotile	60-65 %
Amosite	%
Crocidolite	%
Tremolite	%
Actinolite	%
Anthophyllite	%

NON-ASBESTOS/FIBROUS CONTENT

[CELLULOSE]	%
[FIBROUS GLASS]	%
[SYNTH. POLYMER]	%
[ ]	%
[ ]	%

NON-ASBESTOS/NON-FIBROUS CONTENT

[BIND. MATERIAL] 30-35 %

TOTAL PERCENT ASBESTOS: 60-65 %

COMMENTS:

Method: Polarized Light Microscopy/Dispersion Staining (PLM)
40 CFR Part 763 App. A to Subpart F

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Field Bulk Sample # : 1/0228/014/02

LABORATORY REPORT - BULK ASBESTOS ANALYSIS

Site : Presidio of San Francisco
Project Name : Installation Asbestos Survey
Project Number : 2901
Client : U.S. Army Corps of Engineers

Material Code #: 564	Material Description: PIPE WRAP		
Laboratory Sample #: ASB95 - 3043		Batch #: 146	Matrix : BULK

DATES:
Received: 04/21/95 Collected: 04/18/95 Reported: 04/25/95

GROSS DESCRIPTION : Friable [X] Fibrous [X] Homogenous [X]

COLOR/APPEARANCE : GRAY

ASBESTOS CONTENT

Chrysotile	60-65 %
Amosite	%
Crocidolite	%
Tremolite	%
Actinolite	%
Anthophyllite	%

NON-ASBESTOS/FIBROUS CONTENT

[CELLULOSE]	%
[FIBROUS GLASS]	%
[SYNTH. POLYMER]	%
[ ]	%
[ ]	%

NON-ASBESTOS/NON-FIBROUS CONTENT

[BIND. MATERIAL] 30-35 %

TOTAL PERCENT ASBESTOS: 60-65 %

COMMENTS:

Method: Polarized Light Microscopy/Dispersion Staining (PLM)
40 CFR Part 763 App. A to Subpart F

* N.D. = None Detected (Method Detection Limit is 1%); Trace = Less 1%
* If sample is not homogeneous, separate components are analyzed separately and a single result is reported.
* Lab measurements and supporting documentation are available upon request.
* This report relates only to items tested.
* This report must not be used to claim product endorsement by NVLAP or any agency of the U.S. Government.
* Dust, tile, and vinyl may contain asbestos fibers that cannot be detected with PLM. If greater certainty concerning asbestos content is desired, electron microscopy or XRD is recommended.

Marcie Dilks

MARCIE DILKS
NVLAP Signatory

R.A. CLARKE
Asbestos Analyst

Versar INC
NVLAP Accreditation # 1122

Field Bulk Sample # : 1/0228/014/03

LABORATORY REPORT - BULK ASBESTOS ANALYSIS

Site : Presidio of San Francisco
Project Name : Installation Asbestos Survey
Project Number : 2901
Client : U.S. Army Corps of Engineers

Material Code #: 564	Material Description: PIPE WRAP	
Laboratory Sample #: ASB95 - 3044	Batch #: 146	Matrix : BULK

DATES:
Received: 04/21/95 Collected: 04/18/95 Reported: 04/25/95

GROSS DESCRIPTION : Friable [X] Fibrous [X] Homogenous [X]

COLOR/APPEARANCE : TAN

ASBESTOS CONTENT

Chrysotile	60-65 %
Amosite	%
Crocidolite	%
Tremolite	%
Actinolite	%
Anthophyllite	%

NON-ASBESTOS/FIBROUS CONTENT

[CELLULOSE]	%
[FIBROUS GLASS]	%
[SYNTH. POLYMER]	%
[ ]	%
[ ]	%

NON-ASBESTOS/NON-FIBROUS CONTENT

[BIND. MATERIAL] 30-35 %

TOTAL PERCENT ASBESTOS: 60-65 %

COMMENTS:

Method: Polarized Light Microscopy/Dispersion Staining (PLM)
40 CFR Part 763 App. A to Subpart F

* N.D. = None Detected (Method Detection Limit is 1%); Trace = Less 1%
* If sample is not homogeneous, separate components are analyzed separately and a single result is reported.
* Lab measurements and supporting documentation are available upon request.
* This report relates only to items tested.
* This report must not be used to claim product endorsement by NVLAP or any agency of the U.S. Government.
* Dust, tile, and vinyl may contain asbestos fibers that cannot be detected with PLM. If greater certainty concerning asbestos content is desired, electron microscopy or XRD is recommended.

MARCIE DILKS
NVLAP Signatory

R.A. CLARKE
Asbestos Analyst

6850 VERSAR CENTER • P.O. BOX 1549 • SPRINGFIELD, VIRGINIA 22151 • TELEPHONE: (703) 750-3000

Versar INC
NVLAP Accreditation # 1122

Field Bulk Sample # : 1/0228/016/01

LABORATORY REPORT - BULK ASBESTOS ANALYSIS

Site : Presidio of San Francisco
Project Name : Installation Asbestos Survey
Project Number : 2901
Client : U.S. Army Corps of Engineers

Material Code #: 541	Material Description: VINYL BASEBOARD		
Laboratory Sample #: ASB95 - 3108		Batch #: 155	Matrix : BULK

DATES:
Received: 04/21/95 Collected: 04/18/95 Reported: 04/28/95

GROSS DESCRIPTION : Friable [ ] Fibrous [ ] Homogenous [X]

COLOR/APPEARANCE : BLACK

ASBESTOS CONTENT

Chrysotile	%
Amosite	%
Crocidolite	%
Tremolite	%
Actinolite	%
Anthophyllite	%

NON-ASBESTOS/FIBROUS CONTENT

[CELLULOSE]	%
[FIBROUS GLASS]	%
[SYNTH. POLYMER]	%
[ ]	%
[ ]	%

NON-ASBESTOS/NON-FIBROUS CONTENT

[BIND. MATERIAL] 95-100 %

TOTAL PERCENT ASBESTOS: N.D. %

COMMENTS:

Method: Polarized Light Microscopy/Dispersion Staining (PLM)
40 CFR Part 763 App. A to Subpart F

* N.D. = None Detected (Method Detection Limit is 1%); Trace = Less 1%
* If sample is not homogeneous, separate components are analyzed separately and a single result is reported.
* Lab measurements and supporting documentation are available upon request.
* This report relates only to items tested.
* This report must not be used to claim product endorsement by NVLAP or any agency of the U.S. Government.
* Dust, tile, and vinyl may contain asbestos fibers that cannot be detected with PLM. If greater certainty concerning asbestos content is desired, electron microscopy or XRD is recommended.

MARCIE DILKS
NVLAP Signatory

R.A. CLARKE
Asbestos Analyst

Versar INC.
NVLAP Accreditation # 1122

Field Bulk Sample # : 1/0228/017/01

LABORATORY REPORT - BULK ASBESTOS ANALYSIS

Site : Presidio of San Francisco
Project Name : Installation Asbestos Survey
Project Number : 2901
Client : U.S. Army Corps of Engineers

Material Code #: 570	Material Description: VINYL BASEBOARD MASTIC		
Laboratory Sample #: ASB95 - 3109		Batch #: 155	Matrix : BULK

DATES:
Received: 04/21/95 Collected: 04/18/95 Reported: 04/28/95

GROSS DESCRIPTION : Friable [ ] Fibrous [ ] Homogenous [X]

COLOR/APPEARANCE : BROWN

ASBESTOS CONTENT

Chrysotile	%
Amosite	%
Crocidolite	%
Tremolite	%
Actinolite	%
Anthophyllite	%

NON-ASBESTOS/FIBROUS CONTENT

[CELLULOSE]	%
[FIBROUS GLASS]	%
[SYNTH. POLYMER]	%
[ ]	%
[ ]	%

NON-ASBESTOS/NON-FIBROUS CONTENT

[BIND. MATERIAL] 95-100 %

TOTAL PERCENT ASBESTOS: N.D. %

COMMENTS:

Method: Polarized Light Microscopy/Dispersion Staining (PLM)
40 CFR Part 763 App. A to Subpart F

* N.D. = None Detected (Method Detection Limit is 1%); Trace = Less 1%
* If sample is not homogeneous, separate components are analyzed separately and a single result is reported.
* Lab measurements and supporting documentation are available upon request.
* This report relates only to items tested.
* This report must not be used to claim product endorsement by NVLAP or any agency of the U.S. Government.
* Dust, tile, and vinyl may contain asbestos fibers that cannot be detected with PLM. If greater certainty concerning asbestos content is desired, electron microscopy or XRD is recommended.

MARCIE DILKS
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R.A. CLARKE
Asbestos Analyst

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Versar INC.

APPENDIX D

ACM Chain of Custody Records

B-153

Bulk Sample Chain of Custody Record

VERSAR, Inc.

This Building Only

ASBESTOS AND LEAD BASED PAINT RE-SURVEY AT PRESIDIO OF SAN FRANCISCO, CA

Client: COE PRESIDIO

Project#: 2901

Lab File#:

Site/Building #: 01/0228

Sample Date: 04 — 18 — 95

Analysis Requested: (PLM,) SEM, or Other:

Turnarcund Time: (Normal,) Other

Results To: Phone#:

Site#	Bldg#	HA#	S#		Material Code
01	0228	001	01	ASB95-3090.	564
01	0228	002	01	ASB95-3093.	564
01	0228	003	01	ASB95-3096.	106
01	0228	001	02	ASB95-3091.	564
01	0228	002	02	ASB95-3094.	564
01	0228	003	02	ASB95-3097.	106
01	0228	001	03	ASB95-3092.	564
01	0228	002	03	ASB95-3095.	564
01	0228	003	03	ASB95-3098.	106

Total Samples This Page Only: 9

Total Samples On All Pages, this Building: 23

Total All HA's, including Assumed, for ALL Pages: 17

	Company	Print Name	Signature	Date	24 hr Time
Relinquished By:	Versar	James M. Buchert		4-18-95	1430
Received By:					
Relinquished By:					
Received By:					
Relinquished By:					
Received By:					

APR 2 1 1995

K. Burgess

RECEIVED MAY 0 4 1995

B-154

Bulk Sample Chain of Custody Record

VERSAR, Inc.

This Building Only

ASBESTOS AND LEAD BASED PAINT RE-SURVEY AT PRESIDIO OF SAN FRANCISCO, CA

Client: COE PRESIDIO

Project#: 2901

Lab File#:

Site/Building #: 01/0228

Sample Date: 04-18-95

Analysis Requested: (PLM), SEM, or Other:

Turnarcund Time: (Normal), Other

Results To: Phone#:

Site#	Bldg#	HA#	S#	Lab Use Only	Material Code
01	0228	004	01	ASB95-3099.	506
01	0228	005	03	ASB95-3102.	305
01	0228	006	03	ASB95-3105.	305
01	0228	005	01	ASB95-3100.	305
01	0228	006	01	ASB95-3103.	305
01	0228	007	01	ASB95-3106.	569
01	0228	005	02	ASB95-3101.	305
01	0228	006	02	ASB95-3104.	305
01	0228	008	01	ASB95-3107.	559

Total Samples This Page Only: 9

Total Samples On All Pages, this Building: 23

Total All HA's, including Assumed, for ALL Pages: 17

	Company	Print Name	Signature	Date	24 hr Time
Relinquished By:	Versar	James M Buchert	James M Buchert	4-18-95	1430
Received By:					
Relinquished By:					
Received By:					
Relinquished By:					
Received By:					

APR 2 1 1995

K Burgess

B-155

Bulk Sample Chain of Custody Record

VERSAR, Inc.

ASBESTOS AND LEAD BASED PAINT RE-SURVEY AT
PRESIDIO OF SAN FRANCISCO, CA

Client: COE PRESIDIO
Project#: 2901
Lab File#:
Site/Building #: 01/0228

Analysis Requested: (PLM) SEM, or Other:
Turnarcund Time: (Normal,) Other
Results To: Phone#: Sample Date: 04-18-95

Site#	Bldg#	HA#	S#	Lab Use Only	Material Code
01	0228	016	01	ASB95-3108.	541
01	0228	017	01	ASB95-3109.	570

Total Samples This Page Only: 2
Total Samples On All Pages, this Building: 23
Total All HA's, including Assumed, for ALL Pages: 17

	Company	Print Name	Signature	Date	24 hr Time
Relinquished By:	Versar	James M. Buchert		4-18-95	1430
Received By:					
Relinquished By:					
Received By:					
Relinquished By:					
Received By:	K Burgess				

* Page 4 of 4 for building 0228 sent separately for 24 hour turnaround

B-146

Bulk Sample Chain of Custody Record
VERSAR, Inc.

Page 4 of 4 *
This Building Only

ASBESTOS AND LEAD BASED PAINT RE-SURVEY AT
PRESIDIO OF SAN FRANCISCO, CA

Client: COE PRESIDIO
Project#: 2901
Lab File#:
Site/Building #: 01/0228

Analysis Requested: (PLM) SEM, or Other:
Turnaround Time: Normal, (Other) 24 hour turnaround
Results To: Phone#:

Site#	Bldg#	HA#	S#	Sample#	Material Code
01	0228	014	01	ASB95-3042.	564
01	0228	014	02	ASB95-3043.	564
01	0228	014	03	ASB95-3044.	564

Lab Use Only

Total Samples This Page Only: 3
Total Samples On All Pages, this Building: 23
Total All HA's, including Assumed, for ALL Pages: 17

	Company	Print Name	Signature	Date	24 hr Time
Relinquished By:	Versar	James M. Buchert		4-18-95	1430
Received By:					
Relinquished By:					
Received By:					
Relinquished By:					
Received By:		K. Chewning			

* Pages 1 through 3 sent separately (for normal turnaround time)